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CONTENTS

Rolling Stock Costs on British Railways

DURING the present hearing by the Charges Consultative Committee of the British Transport Commission's application for a 16⅔ per cent. increase in railway freight charges, and in various Parliamentary statements since, some details have been given of the steep increases in costs which the railways have to bear. The general level of railway costs is now about 120 per cent. above pre-war, compared with an increase in rates and fares of 55 per cent. Although rolling stocks costs have not risen as much as some others—the price of sleepers, for example, has risen by 343 per cent.—nevertheless, they are very substantially greater than pre-war. The present cost per ton of building a locomotive is £156, which compares with £73 before the war. A main-line composite coach is now £5,000 against £2,200, and a sleeping car and a dining car each now come out at £8,000, which is double the 1939 figure. The relative increase in the case of a suburban compartment coach is rather greater—£4,000 as against £1,800. Wagon costs, too, in general are up by more than 100 per cent. The new standard 16-ton all-steel mineral wagon is £400, which compares with only £115 for the pre-war 12-ton wagon; a 20-ton hopper coal wagon has risen from £250 to £568, and a 12-ton steel-framed covered goods wagon, vacuum fitted, is now £410; a similar vehicle before the war was obtainable for £200.

Leopoldina Railway Scheme of Arrangement

THE proposals for the distribution of the estimated proceeds of the sale to the Government of Brazil of the Leopoldina Railway are outlined elsewhere in this issue. After the railway had run at a loss for many years, an agreement signed in May, 1949, provided for sale at £10 million; the line was to remain in the ownership of the company, but to be operated by an administrator appointed by the Brazilian Government, pending ratification of the sale agreement. The net proceeds of the sale are estimated at only some £8·5 million, which may, however, prove an under-estimate. The scheme of arrangement is subject to the consent of all classes of stockholders. Sacrifices are asked from holders of all classes of capital, ordinary holders being offered £11, and preference stockholders £28 per £100 nominal of stock, while holders of debentures are asked to forgo some of their arrears of interest. The scheme will disappoint many, but as such a scheme is a prerequisite of sale, and agreement to any other scheme by all those called on to make sacrifices is unlikely, it is probably the best that can be done in the circumstances.

Colonial Railway Standards Conference

THE members who attended the Colonial Railway Standards Conference in London from March 27-31, which formed the subject of an editorial article in our March 31 issue, were agreed that a most successful beginning had been made, and that the exchange of views had been of great value. The Chairman, Mr. Gorell Barnes, in his concluding address, said that it appeared the wish of the Conference that a similar meeting should be held in the near future, possibly in London next year. The recommendations of the conference are being communicated to the Colonial Governors and it is understood that the Belgians, who are affected by any standardisation schemes in Africa, have asked to be informed of the outcome of the discussions. Major-General G. S. Szlumper, who was the representative of the Locomotive Manufacturers' Association, was prevented by illness from attending, and his place was taken by Mr. W. Cyril Williams. The Ministry of Supply was represented by Messrs. R. E. Nelson (carriages and wagons) and A. G. Dunn (locomotives).

British Investments in Cuba

THE slow decrease over 20 years in the amount of British capital invested in Cuba is the subject of an article in a recent issue of *The South American Journal*. British interests are now comprised in the United Railways of Havana and in some tobacco companies. They totalled £24 million in 1949, with a return of 0·7 per cent., with less than £2 million receiving a return, a decline in most respects from the preceding year. In 1930, total British investments were £36 million, about one half of which received a yield, the rate of interest being 2·2 per cent. Regarding the railways, for the first time no interest was paid, in 1949, on any of the United Railways of Havana capital of £23 million, compared with 0·3 per cent. in 1948, and the heavy deficit was much increased. The sale of the undertaking is being negotiated. The decrease in railway investments has been fairly steady since 1927, when they totalled £30 million.

Staff Conferences on the London Midland Region

WHEN Mr. John Elliot was Chief Regional Officer of the Southern Region, he inaugurated a series of conferences with the conciliation staff soon after the Transport Act came into effect. The conferences were markedly successful and have been continued by Mr. C. P. Hopkins, who succeeded Mr. Elliot at Waterloo at the beginning of this year. Since his transfer to the London Midland Region, Mr. Elliot has held two conferences with representatives of the staff. The first of these was at Leeds, on

March 28, when he and his officers met 200 members of the staff; the second was at Birmingham three days later, when they had an audience of 150. On these occasions the discussion was confined to the implications of the recent changes in Regional boundaries as they affect the staff of the London Midland Region. From a staff point of view that is one of the most live subjects at the present time. The numbers attending the conference are an indication of the importance attached to them by the men, who were also afforded an opportunity of meeting their new Chief Regional Officer. Many questions were asked in the direct and informal manner which the C.R.O. encouraged, and every aspect of the problem was thoroughly gone over. Mr. Elliot, in the three months since he has been with the largest of the British Railways Regions, has travelled extensively over the line, visited a large number of the more important centres, and established personal contact with all his officers.

Overseas Railway Traffics

CANADIAN Pacific Railway net earnings during February were £14,000 and compared with a £64,000 deficit for the same month last year. This improvement by £78,000 was brought about by a substantial reduction in working expenses despite the continuing decline in gross earnings. C.P.R. gross earnings for the month fell from £8,967,000 to £8,801,000 and expenses were down by £244,000 at £8,787,000. Aggregate gross earnings since January 1 are now £1,240,000 lower at £16,982,000 and the deficit in net earnings has increased from £165,000 to £634,000. Gold Coast traffics for February showed a £6,199 decline to £234,159, though as a result of previous advances in receipts, the aggregate for 48 weeks is £163,306 higher at £2,547,700. There were advances in railway, street tramway, and road motor traffics of the Victorian Railways during December, so that receipts for the month improved by £372,920 to £1,866,026. The decline in Antofagasta (Chili) & Bolivia traffics continued in the fortnight ended April 2, when there was a £30,330 setback and receipts for the current 13 weeks are £114,390 lower at £770,744.

The British Railways Fleet

VESSELS in the British Railways service, which, without taking into account the contributory rail earnings, were responsible for £10 million gross receipts in 1948, shortly will be engaged to the maximum capacity with heavy seasonal traffics. The April issue of the *British Railways Magazine* shows how the railways of this country have always been in the van in the application of advances in marine engineering. They were pioneers in regard to the adoption of the steam turbine and the geared turbine as well as the water-tube boiler. During the period from 1939 to 1947 a loss of 51 vessels had to be faced, mostly the result of enemy action, but since the end of the war, despite the high cost of building, there have been added 19 new vessels, and seven others are now building. At the present time the fleet consists of 73 ships for the cross-Channel routes and 63 for coastal and lake services having a gross tonnage of 175,000. Last year the cross-Channel ships to the Continent and Ireland and the Channel Islands conveyed 3,600,000 passengers and 1,300,000 tons of cargo.

Commercial Train Services

IN the recent series of articles on the commercial train services between London and the provinces, one defect has been shown to exist in nearly every case: the lack of any train service which enables business men, starting out from London in the morning, to have sufficient time for work at their destination before returning home the same night. This applies even in the cases of Bristol, Birmingham, and Nottingham, where the first practicable arrivals from London are between 11 and 11.30 a.m., and these are almost the only provincial cities 100 miles or more from London where the train service gives any opportunity for business before lunch. This is the more surprising because the train service in the opposite direction is greatly superior; arrivals in London from more distant places, such as Leeds and Sheffield, before 11.30 a.m., have been the rule for many years. It is often objected that business men are disinclined to make very early starts from home, but only very rarely have they been given the opportunity of doing so; and the objection can in some degree be overcome by a pick-up stop in the outer suburban area, as at Watford Junction or High Wycombe. The same argument was formerly used against earlier morning starts for holiday trains on summer Saturdays from London. Moreover, the greater difficulty, in 1949 compared with 1939, of obtaining hotel accommodation in the provinces, and its increased cost, may be additional incentives to business men to make a double trip in the day.

An Important Norfolk & Western Realignment

IN 1888 the Norfolk & Western Railway completed an important section of new construction across the Appalachian mountains, in West Virginia, to tap valuable coalfields to the west. Today this section, part of the Pocahontas Division, is double line, except the 3,014-ft. Elkhorn tunnel through Flat Top Mountain, where the line is single. The ruling gradients approaching the tunnel are 1 in 90 against westbound trains and 1 in 50 against eastbound traffic, and the limiting curve is 13-deg. (6⅞-ch. rad.). With increasing traffic, the bottleneck of the tunnel and the cost of operation over such gradients and curves had to be eliminated. It was decided to face the expense of a new all-double-line low-level realignment with easier operating conditions, but entailing a much longer summit tunnel. Survey showed that by using a 7,052-ft. tunnel it was possible to secure a 1 in 200 ruling grade on the eastern approach and 1 in 70 compensated for curvature from the west; curves could also be limited to 4½ deg. or nearly 20-ch. rad. Moreover, the summit level could be reduced by 63 ft., and the through length of the line by 1,900 ft. The mountain section of the line is electrified for 56 miles, but only for haulage of heavy coal trains; all other traffic is worked by steam locomotives throughout. It has not been decided whether or not to abandon electrification after the opening of the new tunnel. Construction is well in hand, as described in an article in this issue.

The Accident at Euston

COLONEL R. J. WALKER'S report on the accident at Euston on August 6, 1949, summarised in this issue, shows it to have been due to mistakes of a type easy to make, combined with methods of operation which lacked the safeguards always considered essential today at such a station. When a train is routed wrongly in such circumstances, and it is only the last pair of points that forms the deciding factor, there is usually no time left for those in charge to take effective action to meet a contingency they are not in the least expecting. Colonel Walker pays a tribute to the signalmen and other operating staff for the way in which they have conducted the heavy traffic at Euston for years with such freedom from mishap. Before complete track circuiting was adopted, however, the old lines in the south, such as the Brighton and South Western, always protected against a mistake of this kind by placing carefully a few electrical fouling bars in the platforms at termini, which at least safeguarded against the worst type of mishap, turning a train unexpectedly into a platform already fully occupied. In these matters they were much more progressive than the northern main lines and gained effective protection for a small outlay.

Metre-Gauge Locomotives for Saurashtra Railway

RECENTLY the firm of W. G. Bagnall Limited completed an order for four metre-gauge locomotives for the Morvi Railway, which is now incorporated in the Saurashtra Railway. The engines, which are of the 4-6-2 type, with an axle load of nine tons, are required for operating main-line passenger services. The locomotives are of

plate-frame construction, well stayed throughout, and fitted with cylinders 15 in. dia. × 22 in. stroke. Steam distribution is effected by 9 in. dia. valves actuated by Walschaerts valve gear. The firebox is of Belpaire design, including a copper firebox and copper water space stays having tell-tale holes; a soot blower is fitted on both sides of the firebox, and a steam stand with a master shut-off valve is located on the firebox roof. The leading bogie is of the normal Indian design with volute spring side control, with a side-play allowance of 5½ in. The hind truck is of similar design to that previously fitted to the 2-8-2 locomotives supplied to the Mysore and Jodphur Railways, and provides for the loading of the springs to be constantly carried centrally on the axle bearings.

British Transport Commission Traffics

FOR the first time since July, 1949, the traffic returns issued last week-end by the British Transport Commission showed an increase over the corresponding period of twelve months earlier. The receipts covered the four weeks to March 26, and in total were £110,000 greater than for the similar weeks of 1949. They were £1,279,000 up on the immediately preceding four weeks this year. The effect of the improvement in the latest return is to reduce the decline in receipts so far this year, compared with the like period of 1949, to £845,000.

Gross traffic receipts of British Railways for the four weeks to March 26 were £23,618,000. Although this was £971,000 more than in the previous four weeks this year, it was still £3,000 less in comparison with a year earlier. There was a large rise, £541,000, in passenger revenue on the preceding period, but compared with the similar weeks of 1949, there was a decline of £187,000. Revenue from parcels traffic was up by £77,000 on the previous month, and by £60,000 on the 1949 period. Merchandise brought in £209,000 more on the month, but was £73,000 down on the yearly comparison, but minerals, which rose £100,000 over the previous four weeks, were still up £30,000 over the 1949 period, and coal and coke, greater by £44,000 on the shorter term, rose £167,000 on the year.

Scottish and provincial road passenger transport yielded £156,000 on the month, and £65,000 on the year. London Transport services brought in £149,000 and £50,000 on the similar comparisons. Inland Waterways' takings were up £3,000 on the month, but down £2,000 as compared with a year ago.

For the first quarter of the year £830,000 of the total decline of £845,000 in the British Transport Commission's gross traffic receipts, have arisen on British Railways. Passenger takings have fallen by £919,000, merchandise by £503,000, and minerals by £9,000. In partial offset, parcels traffic has increased by £156,000, and coal and coke movement has brought in £445,000 more.

	Four weeks to March 26		Incr. or decr.	Aggregate to March 26		Incr. or decr.
	1950	1949		1950	1949	
	£000	£000	£000	£000	£000	£000
British Railways—						
Passengers	6,690	6,877	− 187	18,917	19,836	− 919
Parcels, etc., by passenger train	2,191	2,131	+ 60	6,345	6,189	+ 156
Merchandise & livestock	6,632	6,705	− 73	19,188	19,691	− 503
Minerals	2,426	2,396	+ 30	7,111	7,120	− 9
Coal & coke	5,679	5,512	+ 167	16,721	16,276	+ 445
	23,618	23,621	− 3	68,282	69,112	− 830
Road Passenger Transport, Provincial & Scottish—						
Buses, coaches & trolleybuses	2,330	2,265	+ 65	6,779	6,763	+ 16
London Transport—						
Railways	1,114	1,121	− 7	3,322	3,346	− 24
Buses & coaches	2,349	2,296	+ 53	6,837	6,814	+ 23
Trolleybuses & trams	823	819	+ 4	2,424	2,443	− 19
	4,286	4,236	+ 50	12,583	12,603	− 20
Inland Waterways—						
Tolls	56	56	Nil	161	164	− 3
Freight charges, etc.	62	64	− 2	189	197	− 8
	118	120	− 2	350	361	− 11
Total	30,352	30,242	+ 110	87,994	88,839	− 845

The latest return is encouraging in breaking the long line of decline in receipts and particular interest attaches to the sharp upturn in railway passenger revenue in comparison with a month earlier. The inclement weather over Easter makes unlikely a favourable showing in comparison with the holiday weekend last year.

In comparison with 1948 the declines shown by the recent returns are substantial. The similar four weeks two years ago covered the Easter travel, but allowing for that the falls over the last two years are grave. On this basis passenger receipts are down 12·8 per cent. for the four weeks and 16 per cent. for the 12 weeks. Merchandise receipts are 6·2 per cent. below 1948 for the four weeks and 8·7 per cent. for the 12 weeks. The table below shows the more recent percentage changes:—

PERCENTAGE VARIATION 1950 COMPARED WITH 1949

	4 weeks to March 26	12 weeks to March 26
British Railways:—		
Passengers	− 2·7	− 4·6
Parcels	+ 2·8	+ 2·5
Merchandise & livestock	− 1·1	− 2·5
Minerals	+ 1·2	− 0·1
Coal and coke	3	+ 2·7
Total	—	− 1·2
Road Passenger Transport	− 2·8	+ 0·2
London Transport:—		
Railways	− 0·6	− 0·7
Buses & coaches	− 2·3	+ 0·3
Trolleybuses & trams	− 0·4	− 0·7
Total	− 1·1	− 0·1
Inland Waterways	− 1·6	− 3
Aggregate	+ 0·3	− 0·9

Improved Parcels and Mail Clearance

IN a recent paper dealing with the mechanical handling of parcels and mails, presented to the Institution of Civil Engineers, Mr. J. V. Franklin and Mr. J. H. May emphasised that methods of handling Post Office mails and parcels traffic must be peculiar to individual stations by reason of site conditions, the relative positions of incoming and outgoing mails, the volume handled, the time available for loading, and the number of bags or parcels to be handled at peak periods. Nevertheless, it was possible to raise numerous points of interest common to all Regional staffs. The paper dealt at length with the conveyor system installed at Bristol Temple Meads in 1938 for the mechanical handling of mail; the quantity handled amounts to 5,000 bags outwards and 4,000 inwards, 60 per cent. of outward traffic being handled in a period of four hours.

Such a capacity is dependent on ability to load the conveyor, and, more important still, on ability to dispose of the bags on arrival at platform level; and it was pointed out in the paper that there were three important factors: first, the station is comparatively modern; second, sorting is carried out in train order at the sorting office, enabling a flow to be maintained to one platform only, thus reducing switching from one platform to another, and permitting mail in complete batches to be ready sufficiently before the train departure time to allow for loading and trolleying, avoiding unnecessary periods of congestion on the platforms; third, letter mail is handled by Post Office staff and is stowed in the vans. Parcel mail is hauled and stowed by Western Region staff. It was considered that as the installation had operated successfully for ten years, its provision in other similar situations was worthy of serious consideration.

The problem of handling Post Office mails and parcels at Paddington had been appreciated for some time, but for various reasons, the problem could not be tackled as soon as it deserved to be; there had been an increase in parcel and letter bags despatched per day from Paddington between 1937 and 1946, of 3,500 and 500 respectively. It was considered that one of the most pressing needs at Paddington was that of restricting the use of the circulating area known as the Lawn for dealing with outward mail.

It was realised that the problem was not purely a civil engineering one, and that any solution must result from the combined efforts of the Post Office authorities and the traffic and engineering departments. Regarding existing conditions prevailing at Paddington, it was probably considered in 1931 that the extension of the existing subway would provide a convenient access from the depot to the platforms, curtailing the haul of railway parcels traffic and removing some inconvenience to the travelling public. That this subway did not achieve the desired purpose was attributed to the limited capacity of the lifts, each accommodating only two trolleys, or, on narrow platforms, only one. Furthermore, the lifts were too slow to deal with the volume of traffic to be handled, having an observed capacity of 375 bags an hour, which was totally inadequate for prevailing conditions.

It was considered that any scheme designed to release the Lawn must cover the following: (*i*) it must have access by road; (*ii*) communication must be provided with the existing postal sorting office and Post Office Railway, or with a new sorting office; (*iii*) sufficient space must be available for sorting and holding bags; (*iv*) inconvenience to the travelling public must be avoided by reducing to a minimum the number of trolleys on a platform at any one time. Possible alternative solutions proposed were: (*i*) two-level working, with the postal traffic travelling above or below the level of the platforms; (*ii*) separation of the two types of traffic in a horizontal plane; (*iii*) the entire separation of the two types of traffic which, from the point of view of the travelling public, would be the ideal solution, although the repercussions on traffic working would be considerable.

Supersonic River Soundings

A PROBLEM constantly confronting a number of railways results from the behaviour of rivers flowing through alluvial soils and the day-to-day charting of them. Riverside stations, ferries, bridges, and their training works, and lines running parallel to, or near, big rivers are liable to rapid damage and possible destruction caused by oscillation of the current in floodtime. This oscillation causes far-reaching erosion in some places and silting up in others. In this way a riverine station may be in mid-stream in a couple of months, or, alternatively, it may be left high and dry, and unapproachable by craft operating in connection with the railway, unless warning is given by frequent charting. In the worst cases, railway engineers occupy much of their time supervising the almost continuous work of specially-trained staff employed on taking soundings for re-charting, and on re-mapping the courses of vagrant rivers. Several railways in India, the United States, and elsewhere, have been keeping a constant watch on river vagaries in this way for the past 50 years, and even where current swing does not occur seriously, sudden scour that may threaten big bridges and their guide banks has to be guarded against by soundings taken mainly in flood-time.

Until a few years ago, the only means used to keep charts up to date was, we believe, to carry out systematic soundings by hand with lead and line from small craft, so that cross-sections of the rivers could be plotted and depths of water elsewhere could be ascertained for general charting. This is a most difficult task in time of flood with fast-flowing and surging currents, and in these circumstances deep soundings are liable to considerable error, however carefully they are taken. There is also much loss of time and distance—due to drifting—between individual manual soundings. The necessity for taking soundings on the drift can also be dangerous, due to the craft then being temporarily out of control, especially if work is in hand upstream of bridge piers and other obstructions to the current.

For about a year, however, engineers of the Missouri Pacific Railroad, U.S.A., have been using a supersonic depth-recording apparatus for taking soundings, which has revolutionised river charting and halved the time required for its field-work. Previously, 50 per cent. of the time was occupied in mapping the river banks, fixing marks on them for the location of the cross-sections and other land-work; soundings had occupied the other 50 per cent. of the time in the field. Using the new method, the land-work takes 85 per cent., and the soundings only 15 per cent. In this way economy is effected and charting can more easily keep pace with rapid erosion and silting.

More accurate results are also assured by this echo sounding equipment, which consists, essentially, of a portable recording instrument, and of transmitting and receiving oscillators housed in a streamline "fish" suspended from an outrigger frame just under water. By closing synchronised contacts in the recorder an electrical impulse at a frequency of about 14 kilocycles is sent to the transmitting oscillator in the "fish" and there converted into a sound pressure wave. This wave is projected to the river bed at about 4,800 ft. per sec., and is reflected thence, as an echo, to the receiving oscillator, where it is reconverted to an electronic impulse. The time interval between transmission and reception is precisely recorded by the arc-discharge method on a roller chart moving at the rate of an inch a minute, but as the time varies with the distance to the river bed, the recording is in feet and not as a fraction of a second. Some 300 soundings may be recorded in a minute.

Experience has shown only one weakness in this method of sounding. Turbulent water such as occurs downstream from bridge piers or from the propeller of the sounding craft, draws air into the water, and the eddy action is inclined to cause stray recordings. This interruption in normal recording is usually only temporary and the water quickly resumes its homogeneity, when depths again appear on the chart normally. On the other hand, the soundings are considerably more accurate in swift-flowing deep water than those taken by hand; moreover, the possibility of error in recording manual soundings is eliminated, because the supersonic depth recordings are automatic.

Canadian Pacific Railway

ALTHOUGH gross earnings from railway operations of the Canadian Pacific Railway again surpassed those of any previous year, net earnings were substantially below the requirements found reasonable by the Board of Transport Commissioners, according to a statement by Mr. W. A. Mather, President of the company, in the annual report for 1949.

The rate of return on the net investment of the company in railway property was 1·96 per cent. for 1949, far below an adequate level. The gross earnings, $363,252,094, increased $8,000,000, or 2·3 per cent., over those of 1948; of this, about $6,000,000 is attributable to freight traffic. There was a net increase of approximately $18,000,000 from adjustments in freight rates, but this was largely offset by a drop of nearly $12,000,000 in the volume of traffic, which was 6 per cent. lower, measured in tons, and 4 per cent. lower measured in ton-miles.

Net earnings from railway operations in 1949 amounted to $20,600,000, an increase of $2,200,000. The ratio of working expenses to gross earnings was 94·3 per cent., a fractional reduction only from 94·8 per cent. in 1948, the highest ever recorded. Between 1920 and 1939 this ratio fluctuated between 77·3 per cent. and 85·4 per cent. Some of the chief results are given below:—

	1948	1949
	$	$
Passenger revenue	37,848,138	37,786,760
Freight revenue	285,904,350	292,082,977
Miscellaneous		
Gross revenue	355,249,702	363,252,094
Working expenses (including taxes)	336,830,536	342,620,125
Net earnings	18,419,166	20,631,969
Other income	24,864,949	23,636,653
Fixed charges	15,890,264	14,543,817
Net income	27,393,851	29,724,805
Dividends	21,307,682	20,622,768
Balance	6,086,169	9,102,037
	Per cent.	Per cent.
Operating ratio	91·82	91·85

Working expenses increased $5,800,000, and maintenance expenses $5,600,000. Track-laying expenses increased principally because of the installation of additional quantities of track material, including 223 more track-miles of rail. Equipment repair expense was higher, due to increased wage and material costs and to

additional rolling stock. A reduction in transport costs is attributed to a substantial decrease in fuel expenses, in which the increased use of diesel power was a factor.

Operating performance improved; the average freight-train load was greater and freight-train speed increased. Reduced traffic was reflected in a substantial increase in empty freight wagon miles. The 16 per cent. freight-rate increase and an increase from 8 to 15 cents per ton on coal and coke allowed on February 28, 1950, by the Board of Transport Commissioners, would have yielded the railway only an estimated $22,000,000 had they been in effect for the full year 1949. The revenue deficiency established by the Board itself amounted to $30,000,000.

Net earnings from ocean and coastal steamship operations decreased $454,000. Ocean freight traffic was much lower and the effect of this was only partially offset by higher passenger carrying due to the return of the *Empress of France* to the Atlantic route. Two new ships placed in operation on the British Columbia coast routes favourably affected the results. Net earnings of hotels increased $640,000, due mainly to advances in room and meal rates, authorised in July, 1948, while communication services contributed an additional $780,000. Dividend income decreased $2,800,000, principally because of the lower dividend paid by the Consolidated Mining & Smelting Company of Canada.

Canadian Pacific Air Lines showed a net loss of $113,000 as compared with $194,000 in 1948. During the year a trans-Pacific air service from Vancouver to Sydney, Australia, and Hong Kong, was begun. Operations in Canada continued to improve and revenues increased.

Capital appropriations for 1950 total $33,400,000, including $24,500,000 for new rolling stock, making provision for 58 diesel units, 720 freight wagons, 50 parcels vans, and 317 service vehicles. The diesel units, consisting of 30 "A" units, 20 "B" units, and eight shunters, will be placed in service between Cartier and Fort William on the Schreiber division in Ontario.

"Non-operating" employees of the Canadian railways, including hotel employees and employees of other ancillary operations, have made demands for a 40-hr. week with the same weekly earnings, and a wage increase of at least seven cents an hour. This would cost the Canadian Pacific approximately $35,000,000 more annually.

Canadian National Railways

A NEW record in gross revenues of $500,723,386 was made by the Canadian National Railways during 1949, according to the annual report, the first to be signed by Mr. Donald Gordon as Chairman & President. Operating revenues exceeded operating expenses by $22,221,726. After meeting taxes, equipment rents, and other income charges, the net income of $4,057,907 was not sufficient to pay interest charges, and there was a deficiency of $42,043,026, compared with $33,532,741 for 1948.

The less favourable result for 1949 is partly due to the continued disparity between rates and costs, partly to a decline of 5 per cent. in the volume of traffic, and partly to the inclusion, as from April, of the Newfoundland railway and steamship services. The amount available for payment of interest was reduced to $4,057,907, or $7,239,202 less than in 1948. This, with an increase of $1,099,833 in interest charges on bonds held by the public, and of $171,251 in interest charges on government loans, resulted in the income being $8,510,286 less favourable than in 1948.

An additional $7,756,495 operating revenue resulted from the inclusion of the Newfoundland services, and rate increases obtained in 1948 and 1949 brought in an extra $23,464,100. Freight traffic declined 6·44 per cent. and passenger traffic 9·7 per cent.; parcels traffic increased 7·6 per cent. and telegraph business 6·3 per cent.

Operating expenses included an additional $10,340,526 due to the Newfoundland services. Increases in rates of pay and changes in working conditions in 1948 and 1949 swelled expenses by $7,356,000. Higher prices of fuel, sleepers, rails, and other materials added $5,399,000, although the quantities of materials and labour required were less than in 1948 due to the decline in traffic. To offset in part the mounting operating costs, the company joined in the application of the Railway Association of Canada to the Board of Transport Commissioners for a general increase of 20 per cent. in certain freight rates. The principal results were:—

	1948	1949
Route-mileage	23,401	23,902
Passenger train-miles	23,901,589	23,740,378
Goods train-miles	44,982,912	43,160,657
	$	$
Goods revenue	393,544,359	394,424,463
Passenger revenue	41,562,141	43,287,240
All other revenue	56,163,450	63,011,683
Total operating revenues	491,269,950	500,723,386
Operating expenses	464,739,970	478,501,660
Net operating revenue	26,529,980	22,221,726
Taxes, rents, etc.	15,232,871	18,163,818
Interest on public bonds	23,202,818	24,302,651
Government interest	21,627,033	21,798,284
Deficit	33,532,741	42,043,027

Progress was made during the year on recovery of deferred maintenance and $8,000,000 was charged to deferred maintenance reserve. Deferred maintenance, principally rails, ballast, and timber trestles which had accumulated during the war years, has not been fully overtaken. Capital expenditures during 1949 amount to $47,010,441, of which $28,332,025 was for new equipment.

Substantial deliveries are reported in 1949 of new equipment, including 3,065 wagons, eight coaches, 50 overhead refrigerator vans, 37 diesel-electric, and six steam locomotives. On order at the end of 1949 were 492 freight wagons, 25 air-conditioned coaches, 20 sleeping cars, 50 baggage vans, 29 diesel-electric, and three electric locomotives.

The modernisation of passenger coach equipment was continued in the company's shops; eight bedroom buffet-lounge cars, 23 sleeping cars, two parlour cars, and four dining cars were completed.

Diesel-electric locomotives supplanted steam power to a greater extent than in 1948. Mileage of all diesel locomotives in 1949 was 6,358,843, or 6·8 per cent., of the system total locomotive mileage in all services. Exclusive of oil-electric railcars, the company now has in service 148 diesel-electric locomotives of nine different types. In December, tests of a 4,500 h.p. three-unit diesel-electric locomotive were begun in passenger service between Montreal and Winnipeg.

On April 1, the Canadian National was entrusted with the management and operation of the Newfoundland Railway & Steamship Services and of certain telecommunication facilities. From January 1, 1950, there was also added to the system the Temiscouata Railway. These lines brought the mileage of the system to a total of 33,046.

The findings and recommendations of the Royal Commission on Transportation will be of vital importance to the future of the C.N.R. The views and recommendations of the railway have been embodied in an extensive submission filed with the Commission, which states that, in comparison with other railways, an undue proportion of the capital of Canadian National is represented by interest-bearing securities. A large proportion of its capital should be represented by non-interest bearing securities, and a submission to that effect has been made to the Royal Commission. The Canadian National has also advocated a uniform system of accounts for Canadian railways, and that such a system should be prescribed in accounting classifications to be issued by the Board of Transport Commissioners under statutory authority. The company also endorsed the submission of the Raiway Association of Canada, covering in detail the legislative and regulatory aspects of highway competition.

The report refers to the discovery of a major oilfield extending practically all round Edmonton, most of it served by the Canadian National. In 1949, to provide service to these fields, the company constructed 40,000 ft. of trackage, and moved in large quantities of drilling and other material. The railway has retained title to the mineral rights in respect of 3,000,000 acres of lands in Saskatchewan and recently completed arrangements for leasing the exploration and development rights on a rental and royalty basis.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Travel in England

April 3

SIR,—I have read the letter from Mr. Caufield-Giles in your issue of March 31 and would like to explain that although the loudspeaker announcement was not made on the lines desired, passengers were in fact advised in the course of the announcement to seek information at the Enquiry Office for alternative train services.

Many passengers took advantage of this advice, and it is estimated that nearly 100 people were directed by the Enquiry Office staff to Marylebone for the 12.15 p.m. train to Sheffield. Numbers of passengers were also given information as to how best to get to Marylebone, and one of the Enquiry Office clerks actually put four passengers into a taxi at the front of the station to ensure their arrival at the Eastern Region terminus.

Whilst not a route that would be taken from choice because there are no through train services, it is, of course, possible to travel from Euston to Leicester, Trent and Sheffield.

Yours faithfully,

GEORGE DOW,
Public Relations & Publicity Officer

British Railways, London Midland Region,
Euston House, N.W.1.

Eastern Region Electric Services

April 3

SIR,—With reference to the letter from Mr. W. A. Shepherd, published in your issue dated March 24, the reference which has been made to selected key trains is no longer felt to be relevant as the increased frequency and regularity of trains under electrification has considerably lessened the aptitude of traffic to "bunch" with resultant tendency towards an overloading of certain trains.

Only a few ten-coach trains with a maximum seating capacity of 888 seats were formerly operated to cover the service between Liverpool Street, Ilford, Gidea Park and Shenfield, and for the most part eight-coach trains were used before electrification.

It has not so far been found necessary to operate the full service of 21 trains per hour between Liverpool Street and Shenfield, although the framework of the timetable makes provision for it. The full service can be operated when justified by traffic conditions.

Yours faithfully,

M. B. THOMAS,
Public Relations & Publicity Officer

British Railways, Eastern Region,
Marylebone Station, N.W.1.

Wagon Turn-Round

March 6

SIR,—Although I had explained in previous letters that many big industries had repeatedly asked to be provided with much larger wagons, and that the principal traffic officers had demonstrated the practicability of bringing them into general use, Mr. H. Bell and "Traffic Apprentice" continue placing every obstacle they can think of to block the road to their general introduction.

Every traffic officer and stationmaster is well acquainted with conditions at all the collieries and works under their jurisdiction. Evidently, Mr. Bell does not know that ordinary 40-ton wagons are no higher than the present high-sided coal trucks, nor that they are built on bogies which give play to the bodies and wheels—enabling them to negotiate curves more easily than rigid-axle vehicles. This disposes of his ideas on headroom and wheelbases.

He enquires whether I propose scrapping 20-ton coal hoists at all the docks. Certainly. Is he aware that the Americans have long been shipping coal from 70-ton wagons at the rate of one a minute—4,200 tons an hour? But what is one to say of a boast of "smart work" at Grimsby in shipping 3,800 tons of coal from 355 little trucks in 13½ hours? Or of a recent writer to the daily press saying that it took him and 15 other men from one Monday to the next to ship 9,000 tons of coal at Hull! Is it any wonder that the Americans are severely critical of our obsolete methods?

Mr. Bell says that at Seaham the diminutive wagons still in use are not much removed from the days of Stephenson. It would hardly surprise us if he also said that conditions at docks and works there had not been improved since the days of Queen Elizabeth! Although he agrees that 40-tonners might be used on long journeys, it does not matter in the least whether the traffic is carried one mile or 1,000 miles. Why use four 10-ton wagons, instead of one 40-tonner, to carry traffic a few miles? You don't see road hauliers using four one-ton lorries to carry traffic on a short haul to the next street. They use one four-tonner.

Through the failure to follow the example of other countries in educating and encouraging traders to use larger wagons by offering a substantial rebate on them (25 per cent. on 20-tonners), our railways are now completely out of date. So if Mr. Bell, "Traffic Apprentice," and others, want to obtain an appreciation of the great difference which now exists between British and foreign methods, I would recommend them to read that remarkable American book "Railroading from the Rear End," the contents of which, I guarantee, will fill them with amazement. They will then understand why America has long since wrested from England the proud position she occupied all through last century as the leading industrial nation, against whom no other country could compete in coal, heavy iron and steel, and other goods, for overseas trade.

Yours faithfully,

E. R. B. ROBERTS

Eynesbury, St. Neots

Railway Efficiency

April 5

SIR,—That was an interesting report in your March 31 issue of Sir Cyril Hurcomb's addresses at Darlington and Manchester. The Chairman of the British Transport Commission is wise to go among the traders in the North and see what they are like. They would appreciate his straightforward remarks about an advance in railway rates, but one wonders what they made of the freight traffic statistics. To prove that British Railways were doing more work than the companies did before the war, and had increased efficiency, some 1938 results were contrasted with 1948-49. A poor year was thus put against two years of full employment. The year 1937 was the best the companies had after the 1931-33 slump in trade, but conditions then differed so widely from the after-war state of things that a statistical comparison with 1949 is of dubious value.

In 1937 the companies carried 20 million tons (or 6 per cent.) more than British Railways did in 1949, but hauled the average ton for 15 fewer miles. In consequence, 1949 ton-miles were higher by 3,410 million, or 18 per cent. The longer haul since the war is due to changes in trade and industry such as the altered location of factories, the development of trading estates, record activity in iron and steel manufacture, and the National Coal Board's methods of distributing its output. The large volume of long-distance traffic gave British Railways every chance to improve operating statistics. They also had the benefit of many facilities provided since 1937, and ran a light passenger service, which left plenty of room on the lines for freight trains. They had the use of the large mineral wagons, which were installed first during the war and, above all, were rid of the private owners' wagons which caused much unprofitable work to the companies in 1937.

In these advantageous circumstances, British Railways worked 47 million loaded wagon miles more than in 1937, an increase of 1 per cent.; empty wagon miles were 323 million fewer, a decrease of 20 per cent. Total wagon miles were 5 per cent. less and the percentage of loaded to total wagon miles was 72, as compared with 67 in 1937. This enabled British Railways to deal with the 18 per cent. greater volume of traffic by working only 6 per cent. more train engine hours—20,302,000 against 19,154,000. Shunting engine hours were 18,676,000 against 20,332,000, a decrease of 8 per cent., and total engine hours were 1 per cent. less.

Obviously the relation between the amounts of motive power required for train working and for shunting was reversed in 1949. That is why "net ton miles per train engine hour" rose from 960 in 1937 to 1,073 in 1949, or by 11 per cent., while "net ton miles per shunting hour" advanced from 904 to 1,117, or by 28 per cent. In turn, "net ton miles per total engine hour" increased from 466 to 559, or by 20 per cent. The first of these three statistics is the one of real significance, because it gives the work done in an hour by the average freight train. For the first time in Great Britain, the service performed by the average train was equivalent in 1948-9 to the movement of over 1,000 tons for a mile. The second and third statistics are calculations which do not represent units of actual work done.

To sum up, since 1948 British Railways have worked freight traffic in a new environment which favours freedom of movement and economical operation. The trend of their statistics should be so decisively upward that there should be no need to defend their efficiency by quoting what the companies did twelve years ago in different surroundings.

Yours faithfully,

R. BELL

Frognal, N.W.3.

Improved Underground Facilities

February 28

SIR,—Mr. Pascall has suggested in your issue of February 24, a method of improving the connection between Waterloo and Liverpool Street by extending the Waterloo & City tube, but quite apart from the difficulties arising from subterranean obstructions, there would still be the need every morning for thousands of passengers at both ends to change trains.

The Working Party, in its recent plan, has recognised the limited space under London for new routes, but has been unable to see its way to utilising the Waterloo & City tube as part of Route G (between the Windsor Lines and the L.T.S.) because of its poor alignment and non-standard diameter. The City end of this tube is also likely to create trouble when the design of the double station at the Bank for routes F and D has to be considered.

A solution might be the abandonment of the Waterloo & City tube (superseded by route G), and use of its southern arm as a pilot tunnel for the construction of a new line connecting the Wimbledon local line under the Post Office tube to a two-level station at Aldersgate, breaking surface to the north of the Inner Circle at Moorgate (where there are already four tracks), widening under Finsbury Circus (where sewer obstructions are a minimum), and picking up the old route into Platforms 1 and 2 at Liverpool Street main line station.

Thus, suburban passengers on both the South Western and Great Eastern lines could be kept clear of the congestion at the termini and have direct access to the Inner Circle at both Blackfriars and Aldersgate, and to routes D and F and possibly the Central Line as well. The only significant obstruction would be a sewer, but its diversion would not appear to create undue difficulties.

The present Bank terminus would almost certainly get in the way of the proposed routes, so the abandonment of the Waterloo & City tube would simplify the construction of routes D and F. The eastern arm of the tube might be used as a pilot tunnel for constructing these routes so that only about ¼-mile of the present tube would remain completely unused.

The interworking of South Western and Great Eastern locals should present no more difficulty than the interworking of Windsor and Barking locals recommended by the Working Party.

Yours faithfully,

R. B. HOUNSFIELD

34, Gordon Square, W.C.1

Rubber Draftgear

April 4

SIR,—We feel sure that you will be interested to know that our American associates, the Waugh Equipment Company, of New York, have written to us drawing our attention to the article under the heading "Rolling Stock for New York Subway" which appeared on page 279 of the issue of March 10 of *The Railway Gazette*, and point out as a matter of interest that all the cars referred to, some 750 odd, are equipped with the Twin Cushion Rubber Draftgear supplied by them.

Some little time ago in your columns you were good enough to refer to the fact that the "Broadway Limited" of the Pennsylvania Railroad was fitted with these Twin Cushions, and we feel sure that you will agree that it is most encouraging to see this ever-increasing adoption of rubber draftgear in America as a result of this British achievement in design for which this company was responsible, and for which it received so much support from the British privately-owned railway companies in the past and British Railways in the present.

Yours faithfully,

G. E. GODFREY
Joint Managing Director

George Spencer, Moulton & Co., Ltd.,
13-14, Ashley Place, S.W.1.

Crewe Pupils Dinner

April 6

SIR,—In reference to the editorial note in your March 31 issue on the Crewe Pupils & Premiums Annual Dinner, as a Premium Apprentice (1891-1895) I am much interested in the revival of this function.

It would be a great incentive if some one of the many that must still be in this country would take the initiative to undertake the job of getting some of us together again, and meet somewhere most central for them.

As a septuagenarian I feel myself too old to undertake the work of organising a Committee to go into the matter. I trust any readers who can qualify for the post will come forward and offer their services in such a good cause.

I will willingly undertake any light duty to further the revival of such a meeting, which should unite old boys and the younger generation, and be a means for friendly chats on various matters, and the trend of railway work in which we have been engaged in the past or in the future.

Many of my old comrades, I am sorry to say, have "passed out," but there may still be a few of the "Old School" who would join us.

With all good wishes for Old Crewe-ites.

Yours faithfully,

WILLIAM EVETTS

Hampton, Tackley, Oxford

INSTITUTE OF FUEL.—The annual general meeting of the Institute of Fuel will be held on Thursday, April 27, at the Connaught Rooms, Great Queen Street, London, W.C.2, at 11 a.m. It will be followed by a general meeting of members, at which Dr. D. T. Townend will deliver his second Presidential Address. The annual luncheon of the Institute will be held on the same day at 1 p.m., at the Connaught Rooms; the principal guest and speaker will be Engineer Vice-Admiral Sir Harold Brown, Chairman of the Fuel Research Board since 1947.

THE SCRAP HEAP

Railway Minded

Natives are the biggest users of South Africa's railways. They sometimes spend an entire Sunday train-riding—just for the fun of it.—*From the "Sunday Express."*

The Last Round-Up

A steer escaped from a slaughter-house and charged through the streets of Worthing, Sussex, for more than three hr. on April 3. It ran on to the electric railway line to Lancing. Porters stopped trains by waving flags as the steer ran through Lancing Station. At a level-crossing a slaughterhouse man lassoed the steer. —*From the "Daily Mail."*

Useful Retirement

Survivors of a pre-war force of over 400, seventeen coaches of British Railways are parked in sidings near the holiday-spots of Southern England, with nowhere to go, but with a purpose in their immobility. They are "camping coaches," rolling stock fitted with sleeping accommodation and cooking facilities (including cutlery and pots) which are still proving popular with holidaymakers in the summer months. Gradually, the 439 coaches which were scattered all over Britain in 1938 have disappeared, and there is no likelihood of the present meagre allocation being improved.

Still proving popular, also, are the camping apartments—ten old stations, now disused, which have been converted into apartments for about six people. The L.N.E.R. started this scheme some five years before the war, and at the moment the Regions which absorbed the system are the only ones to offer holidays at a station. Five stations are in Scotland—Aberlady and Gullane, in East Lothian, and Culross, Torryburn, and Cairneyhill, in Fife-shire.—*From "The Scotsman."*

An Unusual Ticket

A correspondent has sent us the ticket reproduced below which has been issued in connection with a special train

to be run on April 15. The train has been chartered by the Stephenson Locomotive Society for a tour of little used lines in South London. A curious feature is that the ticket appears to be available to Latchmere Junction, where no station exists.

Smoking on Trains

Members of the Commons took ample revenge this week on those of their predecessors who helped to make trouble for people who dared to smoke in railway trains. It was not until 1868 that Parliament accepted the right of smokers to have compartments on all trains. Originally smoking was not allowed in any carriage and all companies had by-laws against it. The servants of some railways were ordered in all cases to proceed against smokers and to eject them from trains at any station where the crime of smoking was detected. There is a story of an unfortunate visitor who lit a cigar when travelling up from the coast. At the first stop he was not only ejected from the train, but the guard instructed the station staff to see that he was prevented from continuing his journey by any train on that day.

Travelling between Edinburgh and Glasgow a passenger complained to the guard that he smelt tobacco; someone must be smoking on the train. The guard said that he had searched the train, but could find no one smoking. The passenger was not satisfied, brought an action against the company for "inconvenience suffered," and recovered the sum of £8 6s. 8d.—From *"The Manchester Guardian" of April 6.*

Crampton Centenarian

The hundredth anniversary of the opening of the Metz-Nancy railway was commemorated on April 10 by the arrival in Metz of a train hauled by the original Crampton locomotive *Le Continent,* which first went into service on July 10, 1850, and was welcomed on its last journey by M. Schuman, the Foreign Minister. A picturesque crowd of passengers filled the three ancient carriages and the driver and fireman wore resplendent uniforms.—*From "The Times."*

Travel Agents' Soccer Match

Sixty-seven men and women are flying from London to Brussels at the weekend after Easter to watch the first soccer match between Thos. Cook & Son Limited and its associate company, Wagons-Lits. The team and officials will fly over on Friday, April 14, and 52 supporters, all from the London staff of Thos. Cook & Son, will leave on the Saturday; the match takes place at 10 a.m. on Sunday, April 16. In Brussels the party will stay in one hotel and have meals in the Wagons-Lits staff restaurant.

Smoking in Railway Dining Cars

(In a recent debate on smoking in dining cars, it was stated that smoking after a meal freed hydrochloric acid in the system and helped digestion).

When you wish to have a smoke
In a railway dining car,
Please show regard for other folk,
E'er lighting your cigar.

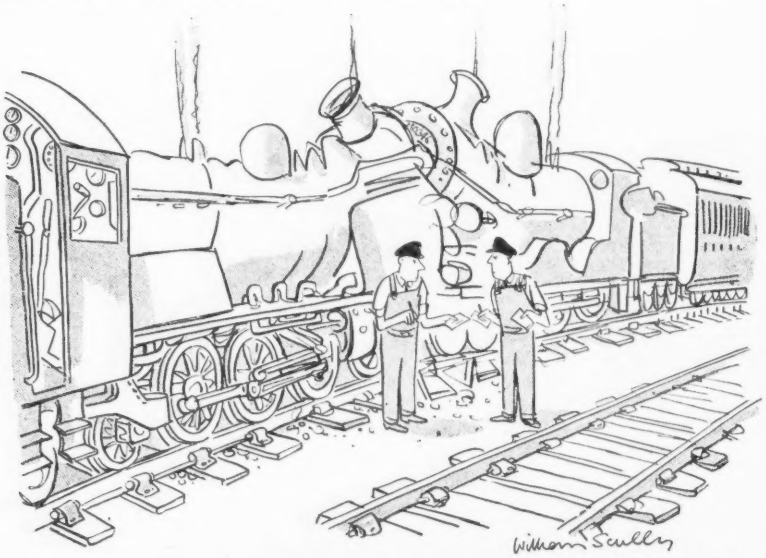
If you must puff cigarette,
When you have had your fill,
It may be other passengers
Have just commenced their grill.

You may want to light your pipe
And give yourself a treat:
But fellow-diner opposite
Is bent upon his sweet!

Is it, then, too much to ask
Of travellers so inclined,
To light cigars, pipes, cigarettes
When everyone has dined?

Then smokers all will be content,
And feel quite calm and placid,
With their digestions good, and freed
By hydrochloric acid!

W. E. N.



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OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

BURMA

Reconstruction of Bridges and Stock

Reconstruction work at Gokteik Viaduct, which has been progressing satisfactorily, is slowing down because of shortage of steelwork. For the Ava Bridge reconstruction, a second pontoon is being erected, and arrangements have been made for obtaining other necessary gear for removal of the fallen spans.

Recently, three old engines were put into service after repairs, and 65 coaches and 174 wagons were repaired at the carriage and wagon sheds at Myitnge, Malagon, Rangoon, and Insein. The erection at the carriage and wagon shed at Rangoon of the second and third body shells of the new bogie third class carriages from India has been completed.

NEW SOUTH WALES

Capacity of Northern Line

The paragraphs relating to the relaying, doubling, and re-signalling of part of the Northern Line appeared incorrectly under the heading "Western Australia" in our March 31 issue.

CANADA

Amalgamation Proposed

A senator has suggested that amalgamation of the C.P.R. and C.N.R. into a single Government-operated line is the only solution to soaring freight costs which bear with increasing unfairness on the prairie provinces.

Freight rates should be set after due regard to competitive rates in land, sea, and air transport. The rates granted to the single system should pay operation, maintenance, and repair costs, but not interest on investment, which should come out of general Federal revenue. Any profit should go into the Federal Treasury.

Such a change, the senator said, would cut costs, eliminate duplication and waste, help producers both in domestic and foreign markets, and eliminate the undue burden of freight costs now falling on the west. It had been estimated that amalgamation would save $75,000,000.

C.N.R. Services Restored

Canadian National Railways passenger service, which had been reduced by 25 per cent. since January 9 last, was restored in full on March 9. The service was temporarily curtailed due to the American coal strike.

UNITED STATES

New Station at Roanoke

The Norfolk & Western Railway has opened its rebuilt station at Roanoke, Virginia. The entrance has a portico of eight pillars and a plate-glass front. The glass doors and windows have aluminium frames.

Behind the ticket counter in the centre of the waiting room is a 28-ft. map of the system in colour. Ticket clerks work behind an open semi-circular counter of Formica in brown and tuscan red. The floors of the waiting room are of terrazzo, walls are pastel brown tile with marble trim, and the high ceiling of acoustic plaster is canary yellow. All lighting is recessed.

Four stairways and two escalators lead from the platforms to the concourse, which has long, clear windows along each side for passengers wishing to watch trains, and is to be extended through to the baggage room wall at the west end of the building.

Microphones are installed in the ticket agent's office and at two points in the concourse. A train board, spotlighted from above, is on the concourse side of the waiting room wall. Near the centre of the concourse is a circular news stand and soda fountain. The lunch counter, open day and night, seats 36.

ARGENTINA

Sectional Strikes by Guards

The guards of the Haedo (Buenos Aires) section of the Sarmiento Railway and the Rosario section of the Mitre Railway recently declared partial strikes on the ground that certain working conditions were not being strictly complied with. The strikes were disowned by the Unión Ferroviaria, and in the case of that on the Sarmiento Railway, the Ministry of Transport issued a communique placing the blame on professional agitators.

SPAIN

Zamora-La Coruña Line

Work is progressing rapidly on the direct Zamora-Orense-La Coruña line which was begun in 1929 as part of a large programme of public works. Two sections, Zamora-Puebla de Sanabria and Santiago-La Coruña, are completed, and work is now going forward on the remaining sections be-

New Station at Roanoke, Virginia, Norfolk & Western Railway

tween Puebla de Sanabria and Orense, and Orense and Santiago.

The stations on the whole line will total 17, and each will have at least three tracks, able to accommodate goods trains of up to 60 wagons. The line is being built for double track, and will include 102 tunnels. The rolling gradient will be 1 in 66, and the sharpest curve 430 yd. radius. There will be watering facilities at approximately 20-mile intervals. When completed the line wil reduce the distance between Madrid and Orense from 438 to 338 miles, and it is expected greatly to benefit the economy of the Province of Galicia.

JUGOSLAVIA

New Railway in Dalmatia

Survey work for a standard-gauge line between Split, the main port on the Dalmatian coast, and Livno, south-western Bosnia, was begun early in February. This line is eventually to connect with the Gorni Vakuf-Bugojno-Donji-Vakuf narrow-gauge railway branching off from the Lasva-Jajce narrow-gauge line west of Serajevo. Livno, with about 5,000 inhabitants, is at an altitude of 2,650 ft., some 32¼ miles north-east of Sinj, the terminus of the 28-mile narrow-gauge railway from Split. As this line has steep gradients and severe curves, only part of its alignment will be used for the new standard-gauge line.

The project is in connection with a more comprehensive scheme of removing the present terminus at Split, from near the quayside of the passenger port, to the suburb of Kopilica, on the northern edge of the town, thus doing away with the railway crossing through the town. The terminus and the goods station would thus be near the new northern port of Split now under construction. The scheme would involve the building of a connecting tunnel 4,920 ft. long near the new terminus.

Split has been linked by railway with the interior of the country since 1925 when the 39¼-mile Gracac-Knin section of the standard-gauge main line from Zagreb was completed. In 1948, the completion of another standard-gauge link, between Knin and Bihac, 62¼ miles long, opened a shorter route between Split and the interior, but better train connections are provided by the longer route *via* Gracac. Split is the second most important maritime centre of the country.

FRANCE

New Double-Deck Bridge

The rebuilding of the bridge carrying the 39¼-mile Bourg to Bellegarde line over the river Ain north-east of Lyons having been completed, through services between the two towns were resumed by the end of March. The bridge is situated between Simandre-sur-Suran, 13½ miles east of Bourg, and Cize-Bolozon. It consists of two tiers of arches (six lower and 11 upper) and has been built in masonry and reinforced concrete. The total height of the bridge is 170½ ft. and the upper deck carrying the railway is 984 ft. long; the lower deck carries a road. The rebuilding cost fr. 120 million. Pending the reconstruction the passenger traffic was maintained by connecting road services between Simandre-sur-Suran and Cize-Bolozon.

Publications Received

Newspaper Carriage and Parcels Traffic on British Railways. By Reginald Bezzant. London: Wm. Dawson & Sons, Ltd., Cannon House, 10, Macklin Street, W.C.2. 5½ in. × 8½ in. 140 pp. Price 15s.—Many fine points of the build-up and changes in the newspaper and general rates from early days, as well as comparison with various rail carriage traffics and classes, are dealt with in this book. A concluding chapter gives the population of towns in the ten railway mileage zone groups of the parcels scale in county and mileage order; the extent of Greater London is also defined. The author has dedicated the book to the Newsvendors' Benevolent & Provident Institution, the Newspaper Press Fund, and the Printers' Pension Corporation, which will receive the income from its sale.

Concrete Simply Explained. (Third and revised edition, 1950), by Victor S. Wigmore, F.S.E. Published by the Society of Engineers (Incorporated), 17, Victoria Street, S.W.1. 48 pp. 8½ in. × 5½ in.; paper cover: price 2s. Though written in simple language so as to be understood by labour engaged in concrete work, this little volume is full of sound practical information and advice, and is of interest to others. Its primary aim is to meet the increasing demand for men capable of turning out first-class work by scientific methods, by widening their knowledge of the best principles of concrete work. Of the five chapters, each of the first four deals with one of the ingredients, cement, sand, aggregate, and water, its tests for quality and strength. The fifth covers concrete as a whole, its mixing, strength, and tests, and also such subjects as shuttering, vibrating, and chute pouring. The necessity for using as little water as possible—without making the handling of the mixture unduly difficult—if strong and durable concrete is to be produced, is emphasised more than once in this handy and informative book.

The Port of Bristol.—This official handbook of the Port of Bristol Authority gives particulars of the City, Avonmouth, and Portishead Docks, and their passenger accommodation, transit sheds, berths, mechanical handling equipment, bonded and general warehouse space, dry-docking, and bunkering facilities. Attention is drawn to the pivotal position of Bristol in relation to the industrial Midlands and to the local and South Wales coalfields. There are also brief notes on the trades of the city and port.

Locomotive Inspection Laws.—The U.S.A. Interstate Commerce Commission, Bureau of Locomotive Inspection, has published a booklet containing rules and instructions for the inspection and testing of steam locomotives and tenders and their appurtenances. Copies are obtainable from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., price 70 cents. The Commission has also issued a booklet, price 55 cents, containing rules and instructions for the inspection of locomotives other than steam.

Summer Holidays in Switzerland.—A timely warning to intending holiday-makers to secure their Swiss currency allotments prefaces the well-produced and comprehensive Swiss holiday programme for 1950 published by Thos. Cook & Son Ltd. The brochure covers many regions of Switzerland, listing resorts both frequented and less well known, the latter including Le Pont in the Jura, Saas Fee in the Pennine Alps, and Schuls-Tarasp in (at least to British travellers) an almost unknown corner of the Grisons. In better-known districts, such as that around the Lake of Lucerne, there is a wide choice, ranging from cosmopolitan towns to mountain villages. Useful travel information is given and also particulars of Continental motorcoach tours which include Switzerland in their itineraries.

Sands Across the Sea.—The Southern Region of British Railways has produced a new edition of this booklet on Brittany, Normandy, and Picardy, which the Southern Railway first published before the war. It contains 216 pages and is fully illustrated by photographs and some clever sketches. Ample information on cross-Channel routes, passport arrangements, Customs regulations, and so on, and a map, are included. The guide is priced at one shilling.

Spain for Holidays.—The Southern Region of British Railways has brought out a 64-page guide to Spain, to which the Duke of San Lucar la Mayor, Chargé d'Affaires at the Spanish Embassy in London, contributes the foreword and extends a warm welcome to British visitors to the country. Well-selected illustrations and sketches accompany an informative and brightly-written text. There is a table which lists the return fares from London to principal Spanish towns (incidentally that to Madrid is as low as £21 13s., second class), and full details are given of the rates and services *via* Paris. This enterprising publication should do much to encourage travel to one of the most varied and interesting lands in Europe.

New Elkhorn Tunnel, Norfolk & Western Railway

To reduce gradients and curvature, a double-line realignment with a 1¼-mile tunnel is being built

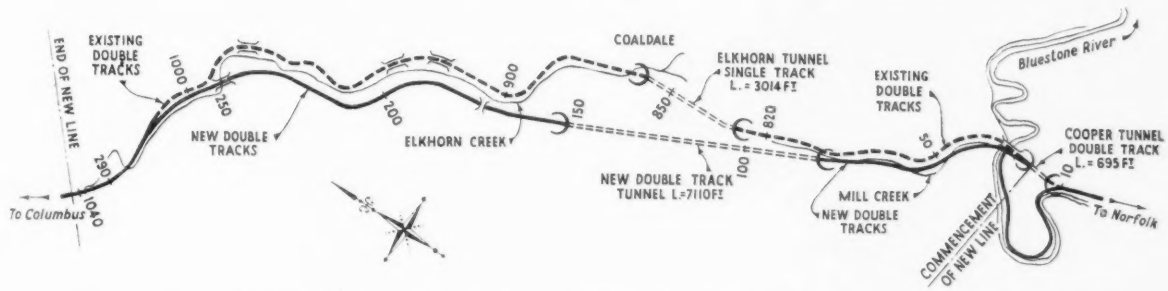
FOR reasons explained in an editorial note on page 410, it became necessary to improve the electrified section of the Norfolk & Western Railway main line through the Appalachian mountains. The improvement takes the form of a realignment reducing the gradients from 1 in 90 and 1 in 50 to 1 in 200 and 1 in 70 compensated for curvature, the sharpest curve from 6¾-ch. to nearly 20-ch. rad.; the summit level by 63 ft.; and the length of the line by 1,900 ft. This could be done only by increasing the length of the summit tunnel from 3,014 ft. to 7,052 ft., and its cross-section from single-line width to a liberal double-track width.

The new tunnel bore is 36 ft. wide and 35 ft. high, and the whole realignment is 5¼ miles long. The tunnel is of ∩-section and excavated through sandstone with some shale and slate, but coal seams also were encountered, as when the old tunnel was bored. The relative locations and profiles of the two tunnels and of the new and old alignments are shown in the diagrams.

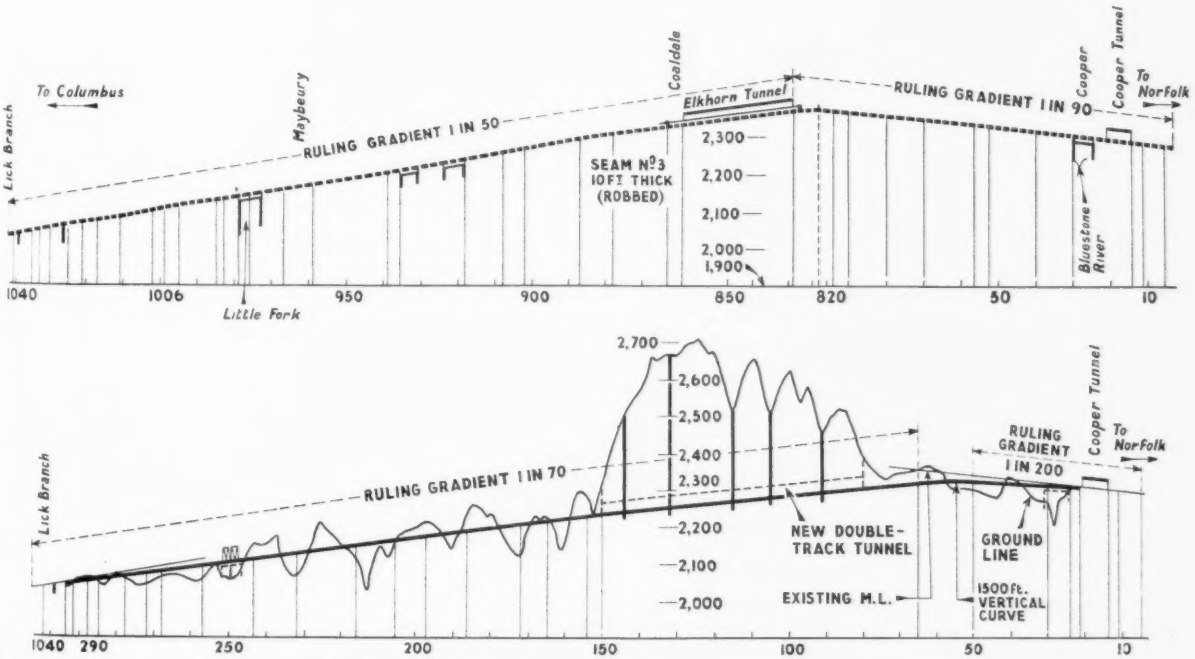
Work at Western End

The materials through which the new headings were driven required continuous support and blasting of more than 14-ft. lengths was generally considered unsafe. Work was begun at the west portal, excavation being effected with a "jumbo" frame enabling drilling to be carried out from the ground and from four levels with 15 water-line pneumatic drills. The jumbo weighs 32 tons and runs on six cast-steel wheels over 100-lb. rails. It is shaped to act as a template for the bore, and is composed of 10-in. R.S.J's carrying 4-in. oak platforms. The two lower platforms are hinged, and for drilling are suspended from the third-level platform frame. For mucking they are dropped down to allow shovels and trucks to pass under the jumbo. The fourth-level platform is smaller than the others to suit the shape of the arch, and is supported by the third-level framing.

For each shot, 210 holes are drilled with 1¾-in. to 2⅝-in. detachable bits to depths varying from 3 ft. to 18 ft., and



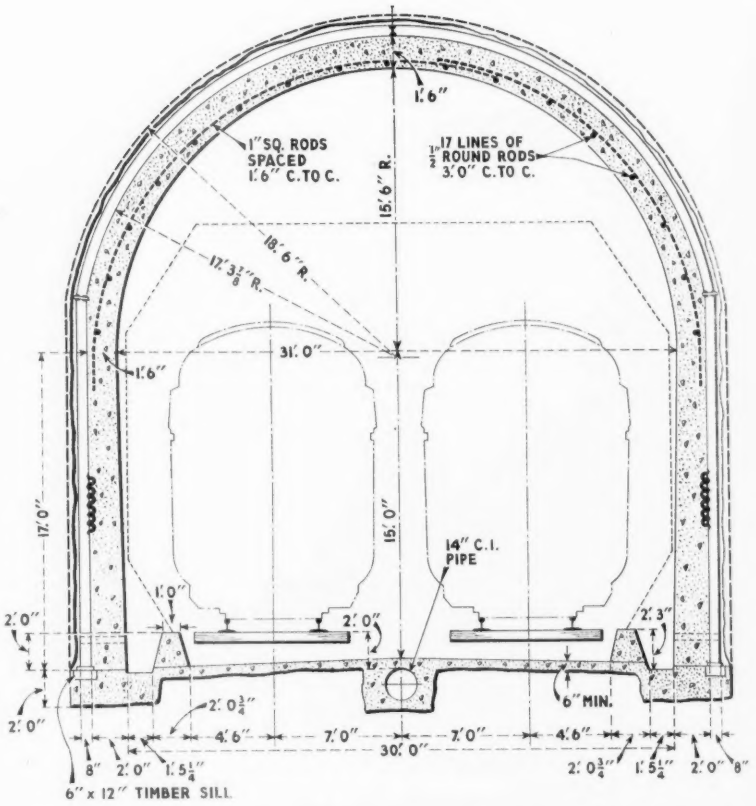
Plan showing old (dotted) and new alignments, including the old single-line and new double-line tunnels



Gradient profiles on (above) old alignment and (below) new alignment, showing the two tunnels and ground line on shortened route

1,800 lb. of 40-per cent. glycerine dynamite are used. When the charges are ready, the jumbo is moved back a safe distance and firing is effected with 440-V. blasting caps connected in parallel at ten 1-sec. intervals. The average quantity of muck per shot is 700 cu. ft., which is loaded into 15-ton back-dump diesel trucks by a 2¼ cu. yd. caterpillar diesel shovel. The width of the bore allows trucks to turn and back up to the face beside the shovel. Electric blowers ventilate the working face, making possible the use of the various diesels.

After mucking, the jumbo moves back to the face, and with its aid and with a crane, steel liner-ribs are erected to within a few feet of the face. These are received at site in four sections, two vertical posts and two quarter-circle members, the steel section used being an 8-in. × 35-lb. wide-flange R.S.J. These were at first fixed at 18-in. intervals, but they were soon altered to 2 ft. 6 in. The verticals are erected by hand on a 12-in. × 6-in. timber sill and the segmental members are erected by crane, the parts being bolted up. To maintain the spacing between the ribs and to absorb impact from the shot-firing, hard-wood toggle-blocks and ¾-in. tie-rods are used at about 5-ft. vertical intervals. Timbers are then wedged between the steel liner ribs and the rock as required. The complete cycle of the works just described takes about 8 hr., and each firing advances the face about 14 ft.



Cross-section of new double-line tunnel. The working face measured 36 ft. by 35 ft.

Work at Eastern End

Work was later begun at the east portal also, but because the contractors' fixed plant and labour are housed to the west of the tunnel, the compressed air lines had to be brought over the mountain to the east face. Work there is not so rapid, and blasting takes place only on alternate days and the drilling shifts are staggered at the two headings. As the gradient falls from east to west, water collecting at the east face has to be pumped out. The two headings met in July last, and the concrete lining is now in hand.

This is 18-in. thick in the arch, and in the side walls it tapers from 18 in. at the springing down to 2 ft. at formation level. The section including the invert or flooring, curbs, and drainage arrangements is shown in the diagram on this page. The arch and side-wall concrete is being poured with two movable steel sections of shuttering, each 45 ft. long and supported by a 6-ft. width of invert at each side, previously cast.

The concrete is supplied by duplex electric concrete pumps from the mixing plant at the west end of the tunnel. The arch is reinforced longitudinally with ½-in. round tie-rods at 3-ft. spacing, and transversely with 1-in. square bars 18 in. apart. These bars curve from near the outer face of the concrete at the springing to near the inner face at the crown.

The clear dimensions of the completed tunnel are: 31 ft. wide at the springing of the arch, and 30 ft. 6 in. high from bottom of rail to underside of semi-circular arch.

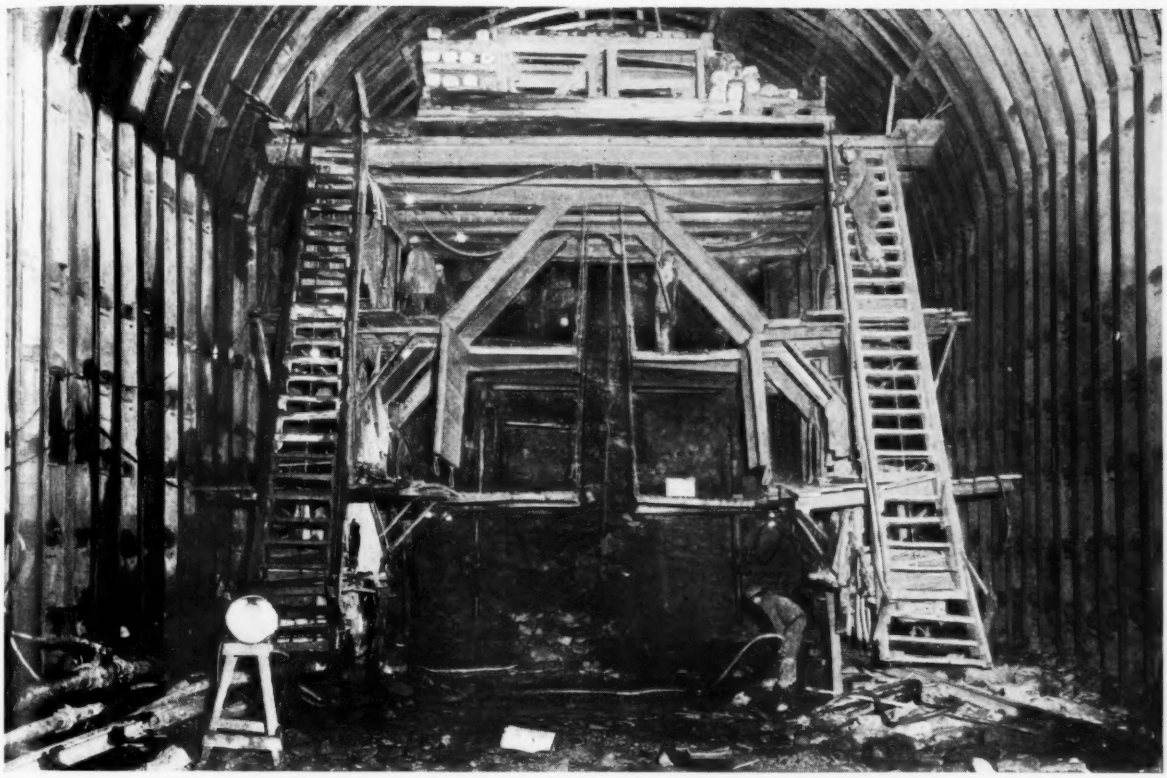
The realignment works at each end of the tunnel involved the movement of some 19,000,000 tons of earth and rock, and the construction of three major bridges, 682 ft., 514 ft., and 200 ft. long, as well as numerous culverts up to 12 ft. × 10 ft. in cross-section.

In the tunnel, excavation totalled 315,000 tons of sandstone, shale, and slate, and its lining contained 92,000 cu. ft. of concrete and about 500 tons of steel reinforcement. The steel rib bracing weighed some 5,000 tons, and 26,000 l. ft. of earthenware piping were required for drainage, and 85,000 l. ft. conduit for high-tension, signalling, and other cables. The estimated cost of the whole improvements work was about $12,000,000.

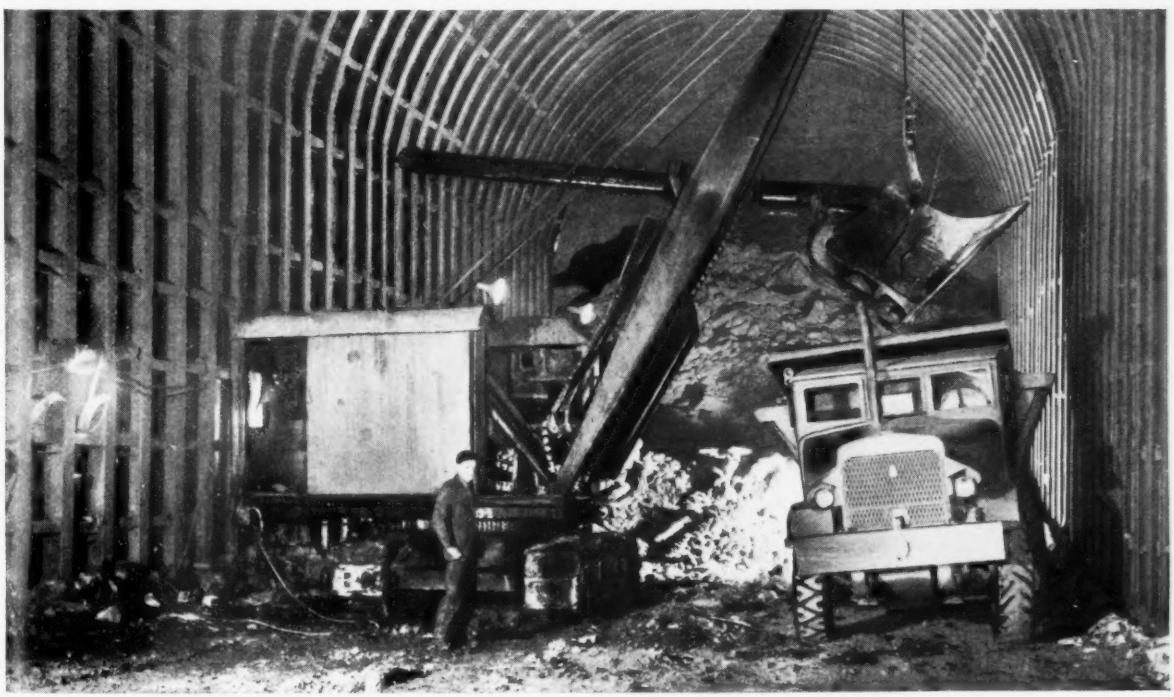
The work is being carried out under the supervision of Mr. A. E. Stone, Chief Engineer, Norfolk & Western Railway, and his assistant, Mr. W. L. Young, and the main contractor is the Sturm & Dillard Construction Company, of Columbus, Ohio. The tunnel is expected to be ready for traffic in June. We are indebted to our contemporary, *Engineering News-Record*, for the above particulars and the illustrations reproduced.

BRITISH HOTELS INQUIRY.—The British Travel & Holidays Association has published the findings of an inquiry into British hotels made by the British Tourist & Holidays Board before its merger with the Travel Association into the new organisation. The report gives the independent views of witnesses representing a wide variety of consumer interests and, in view of general agreement that British luxury hotels are equal to the best in the world, is confined to non-luxury hotels. There is criticism of reception, inflexibility of meal hours, inadequate heating, lack of ice-water, vegetable cooking, and restrictions such as the licensing laws; but the report concludes that, whilst the remedy for some defects lies with hoteliers, the Government should speedily give relief from the high costs of wages and furnishings resulting from the Catering Wages Act and from purchase tax, and abolish "unreasonable" licensing restrictions and the 5s. meal price limit.

New Elkhorn Tunnel, Norfolk & Western Railway



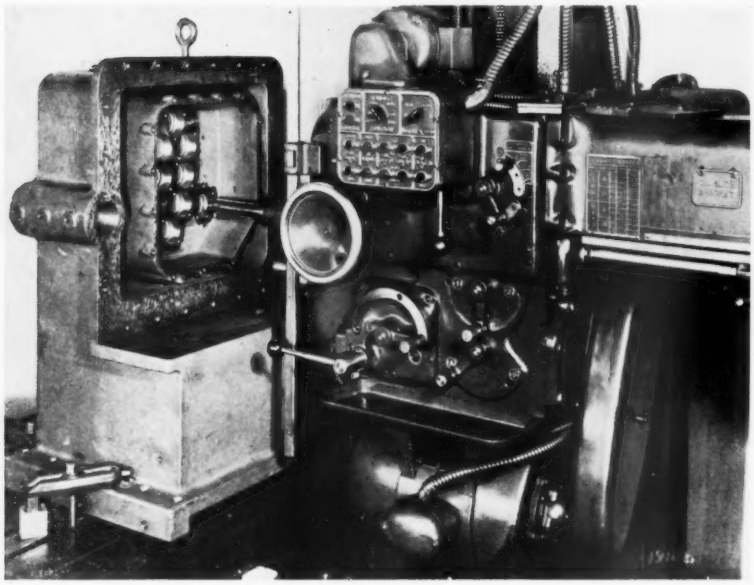
"Jumbo" construction staging carrying 15 water-line pneumatic drills mounted at four levels



Diesel shovel loading muck from blasting into 15-ton lorry. Note the side and arch ribbing

High-Precision Boring Machine

Development of a machine which combines the features of accurate jig-boring with those of a production milling and boring machine



Boring a gearcase using a Microbore boring bar unit

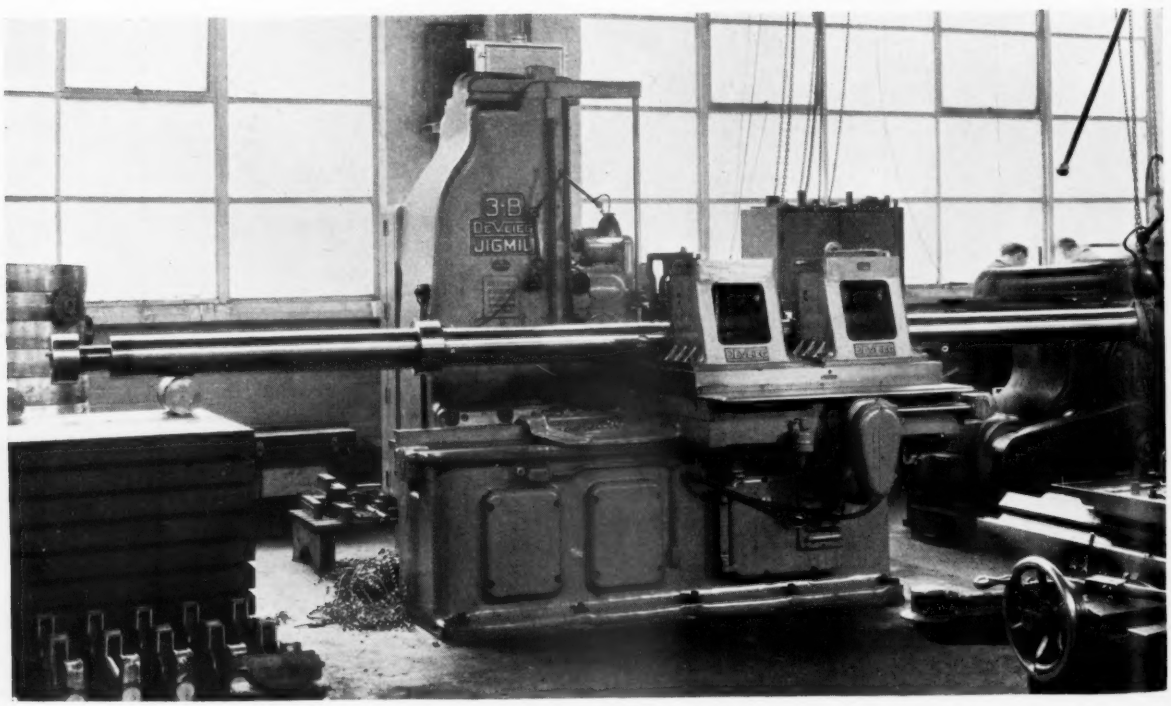
A HORIZONTAL boring and milling machine, known as the Devlieg 3B Jigmil, has been developed by Alfred Herbert Limited, Coventry, the essential features of which are such that they combine those of a machine capable of producing the degree of accuracy associated with jig-boring and those required for production boring and milling.

When the machine is being used on jig-boring, accuracy is obtained by the use of a Microbar boring bar, a new development in adjustable boring bars; cutting tools tipped with Ardolox or other carbide are recommended. The tool, which can be adjusted to 0·0005 in. by direct reading of a vernier scale, and is positively locked after adjustment without disturbing the setting, can be used for accurate or production boring.

The Microbar tools for finish boring are threaded on the shank, 40 t.p.i., and a graduated dial twice the diameter of the tool shank makes size adjustment a simple operation, as the graduated dial has a similar action to that of a micrometer thimble. Accuracy of spacing is obtained automatically on the machine by an automatic positioning device controlled by measuring rods. The machine has a wide range capacity, being capable of dealing with work up to two tons weight, ample power being provided enabling milling operations to be carried out without impairing accuracy required for precision work.

Machine Design

The bed and column of the machine are designed to ensure and maintain accuracy necessary to a machine capable of production output. Their disposition provides a fixed relationship



Front view of the Devlieg 3B Jigmil

between the horizontal and vertical slides. The slides are fitted with narrow guides, the horizontal slide supporting the saddle over the full length of travel. Table retraction parallel to the axis of the spindle permits minimum tool overhang from the spindle nose and facilitates tool adjustment. Operation of a single push-button unlocks and retracts the table at rapid traverse; a second push-button is used to return the table to its original position within an accuracy of ·002 in. and re-lock it automatically.

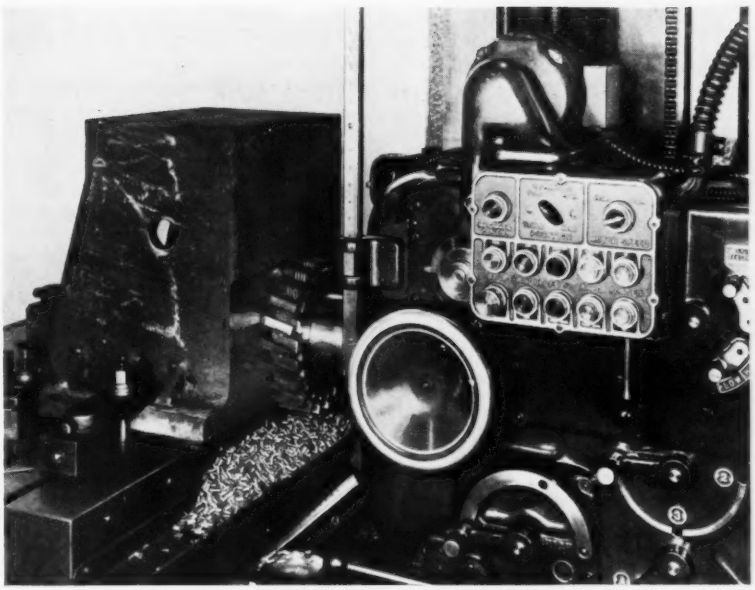
The maximum travel is 16 in., and micrometer adjustment is provided for a ·001 in. positioning and to re-lock automatically within the 16-in. travel. Automatic positioning of saddle and spindle is effected by end measuring rods placed in troughs actuating a limit switch; controls are set for either saddle or head, and the automatic positioning button is depressed. The unit moves under rapid power traverse until the measuring rod operates a limit switch, which reciprocates in its location at successively lower speeds and stops within ·0001 in. of the desired location.

Tension of screws and mechanism is automatically released, the slide being rigidly locked by finger-tip control without affecting its position; the locking action automatically cuts off all motors of the slide mechanism. Either slide can be positioned over a distance of 6 in. in less than ten seconds; repeated accuracy of location is such that a series of holes can first be rough bored, then semi-finished, and finally finish bored. Duplitrol bars are used for repetition work where a series of holes are required to be bored in accurate relationship to each other, the bars being jig-bored at distances to suit the position of holes in the work. A ground peg which fits the jig holes in the bar acts as a striker to operate a limit switch when the automatic positioning is in operation. The device enables hole spacing to be effected rapidly and accurately without the use of measuring rods and micrometers.

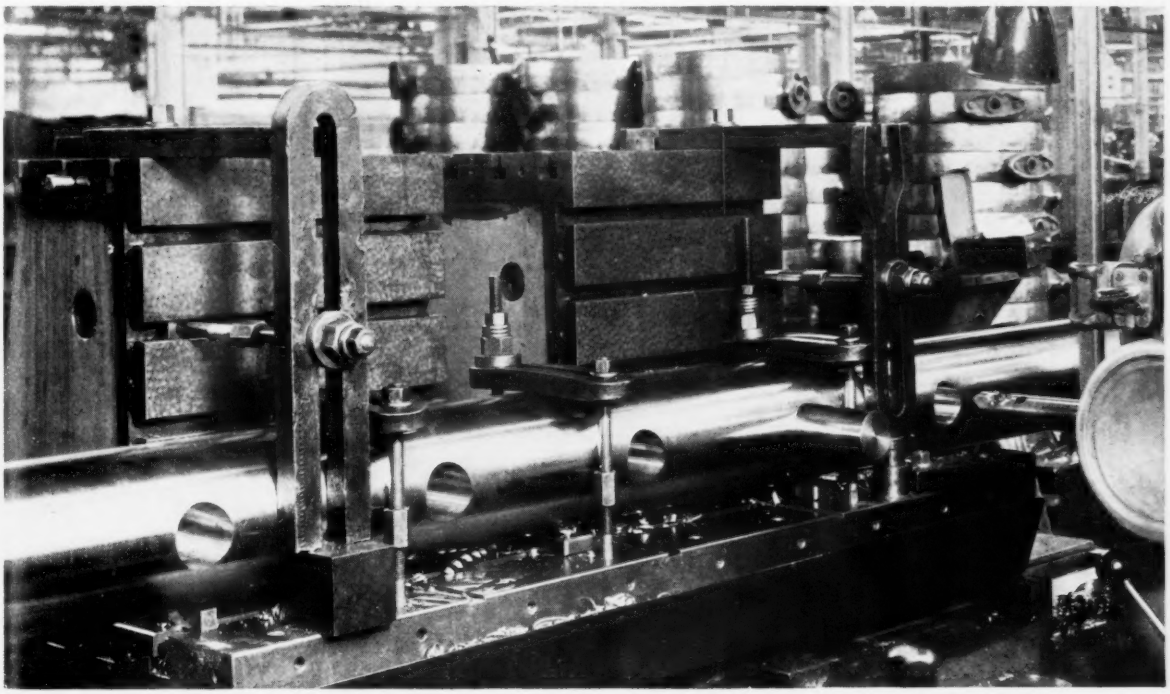
The Duplitrol bars can be bored on the Jigmil using standard measuring rods for the location of the holes; bars should be marked to identify them for vertical or horizontal positions or whichever operation for which they are intended.

The spindle bar is manufactured of Nitralloy steel, sliding in liners of a similar material in the main spindle, spindle drive being by silent chain from a two-speed motor to a change

(*Continued on page* 425)



Face milling operation on a Devlieg 3B Jigmil



Boring locating holes in shaft for 250-ton vertical compression testing machine

Bagnall 4-6-2 Metre-Gauge Locomotives for India

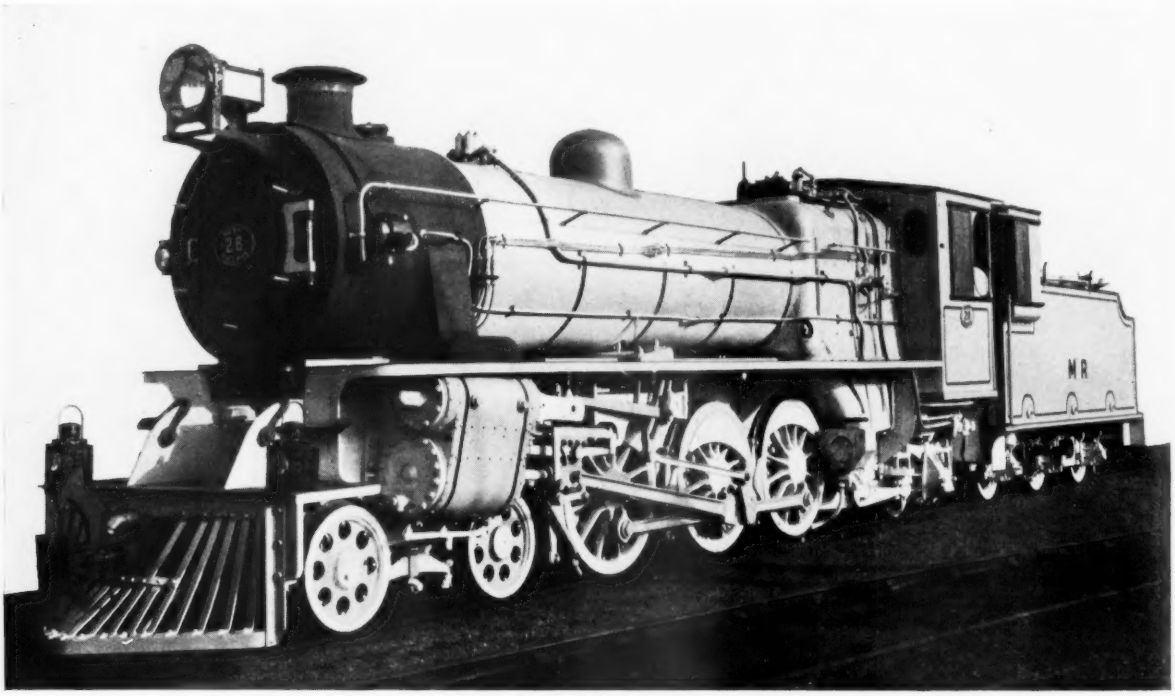
Four metre-gauge engines for the Morvi section of the Saurashtra Railways

AN order for four metre-gauge locomotives for the passenger service on the Morvi section of the Saurashtra Railways has been completed by W. G. Bagnall Limited, Castle Engine Works, Stafford. The design characteristics are conventional, the bogie being of the usual Indian design with volute spring side control and a side play allowance of 5½ in. The hind truck is of a type similar to that fitted to the 2-8-2 locomotives previously supplied to the Mysore and Jodhpur Railways by the same makers, and provides for the loading on the springs to be constantly carried centrally on the axle bearings.

The boiler barrel, 16 ft. 9⅛ in. long, is of telescopic construction in three rings, and the smallest ring at the front end is 4 ft. 0½ in. dia. The boilers have the Belpaire type of firebox, with an inner firebox of copper, and three arch tubes carrying the firebrick arch; water space rigid stays are of copper, with tell-tale holes. Ross-pop safety valves are located on the firebox roof and a superheater of the M.L.S. type is provided. A steam stand is fitted with valves for supplying steam to Gresham & Craven injectors and ejectors, soot blowers and other fittings; a soot blower is fitted to each side of the locomotive.

The firegrate is fitted with a drop-section at the front of the rocking fire-bars, operated from the cab, and the ashpan is of the hopper type, with bottom drop door.

The cylinders, 15 in. dia. by 22 in. stroke, are of close-grained cast iron;



Metre-gauge locomotive for passenger services on the Morvi line

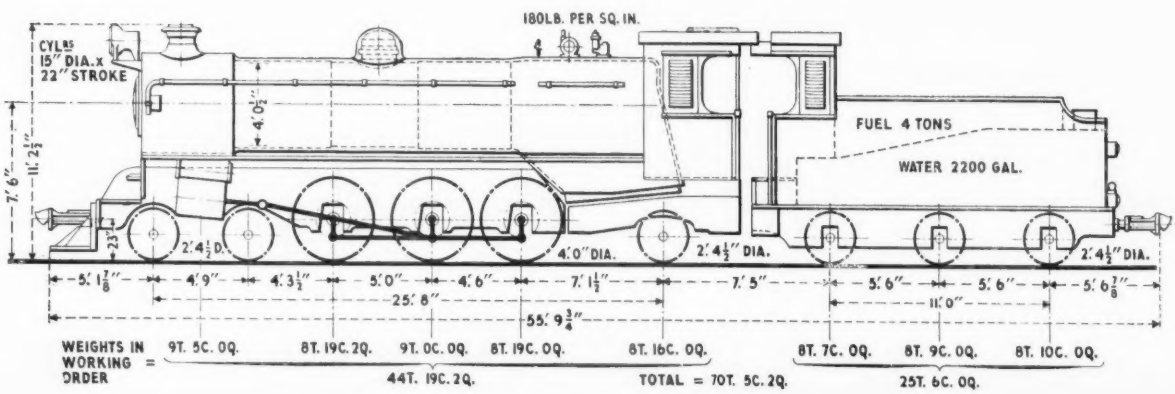


Diagram showing principal weights and dimensions of the locomotive

steam distribution is effected by 8 in. diameter piston valves actuated by Walschaerts valve gear, all motion parts being forged from the solid; the crossheads are of cast steel fitted with cast-iron slide blocks, syphon oil boxes providing lubrication. The connecting and coupling rods are forged from the solid and fitted with best-quality gunmetal bearings; the axleboxes, which are of cast bronze, fitted with gunmetal bearings, are oil lubricated; Lambert-type sanding and A.B.C. buffing and drawgear is provided. Lubrication to cylinders and valves is by an "A.C." Wakefield lubricator.

The frame-plates are ¾ in. thick and well stayed throughout. A built-up saddle supports the smoke-box and boiler at the front end, the boiler support at the rear being on the frame joint casting. The bogie is side controlled by volute springs, and the hind truck provides for the loading on the laminated springs to be carried centrally on the axle bearings; a Stones turbo-generator of 32 V. 500 W. capacity supplies the lighting.

The tender is of the 6-wheel type with a tank capacity of 2,200 gal. and a coal capacity of 4 tons. The locomotives were built to the inspection of the Consulting Engineers, Sir Bruce White, Wolfe Barry & Partners.

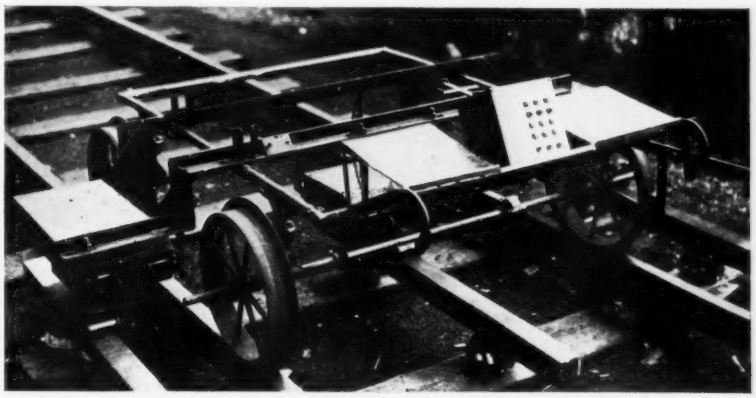
The principal dimensions of the locotives are as follow:—

Cylinders (2)	15 in. dia. × 22 in. stroke.
Coupled wheels, dia.	4 ft. 0 in.
Bogie and hind truck wheels, dia. ...	2 ft. 4½ in.
Total wheel base, engine and tender	45 ft. 1 in.
Heating surface:—	
Boiler and flue tubes	1,078 sq. ft.
Firebox and arch tubes	140 sq. ft.
Total evaporative	1,218 sq. ft.
Superheater	273 sq. ft.
Total	1,491 sq. ft.
Grate area	25 sq. ft.
Boiler pressure	180 lb. per sq. in.
Tractive effort at 85 per cent. boiler pressure	15,778 lb.
Total weight, engine and tender in working order	70·275 tons

Conductor-Rail Gauging Trolley

A SPECIAL hand trolley for the rapid detection of discrepancies in excess of the tolerance limits in the positions of conductor rails relative to the running rails, has recently been designed by London Transport engineers. The trolley consists of a light tubular steel framework carried on four wheels, which are accurately machined with a square section tyre and flange and carefully set to gauge to limit the lateral and vertical movements of the trolley on the running rails.

The framework carries two angle iron members supporting one central and two outside contactor boxes. Fitted on the end of an arm from each contactor box mechanism is a double-flanged roller which rides along the conductor rail; these rollers are interchangeable to fit the various widths of conductor rail. Vertical, or lateral, displacement of a roller causes the arm to pivot, or slide, respectively, and so make electrical contacts in the box.



London Transport hand trolley for conductor rail gauging

Operation of one of the contacts indicates a discrepancy in excess of the allowable limit, but does not measure it. When contact is made, a circuit is completed to give a bell signal and a visual indication on the panel at the end of the trolley. The panel contains three vertical rows of lamps, each row being connected to one of the contactor boxes. The four lamps in a row show whether the discrepancy is up, down, to one side or the other. The position of the discrepancy is then marked on the track and the gauge is adjusted as required by the section maintenance staff.

High-Precision Boring Machine

(*Concluded from page* 423)

box providing a range of 24 spindle speeds from 23 to 1,200 r.p.m. All shafts are mounted on roller bearings. A selector switch is provided for forward and reverse rotation of the spindle. Automatic feeds to the spindle are obtained from a gear train driven off the main spindle, thus providing feeds in inches per revolution irrespective of the spindle speed in use; six quick-changes from ·001 in. to ·012 in. are obtainable.

Rapid traverse of 90 in. per min. and automatic fed to the spindle bar are controlled by a joystick giving directional movement to right or left; rapid speed to the spindle bar is obtained by separate motor, and hand control is also provided with a micrometer dial for ensuring accurate depth control.

Five motors are provided for the spindle drive, rapid traverse movements, automatic positioning, and table retraction, the feed and rapid traverse motors being fitted in the base of the machine, the latter being mounted on a plate on the door permitting the motor to be freed sufficiently to remove the driving chain; the door can be fully opened, providing accessibility for installation and removal.

The various mechanisms are completely protected by electrical and mechanical interlocks, automatic positioning of either table or spindle being determined by a ball-ended selector lever fitted at the side of the bed and the setting of the four-position selector switch on the top centre of the panel; the master panel travels with the spindle head, providing uniform operating convenience in any position of the full range of the machine.

Indexing tables are made in three sizes and fitted with four index plungers, any two of which accurately register. Clamps secure the index table to the main table after indexing.

SPANISH RAILWAYS FARES INCREASED.—A mass meeting of railwaymen was held in Madrid on April 4 to support Government action in increasing fares and freight rates on the Spanish National Railways. The increases are 40 and 60 per cent. respectively, to cover a general wage increase of up to 50 per cent. for railwaymen in the lower wage grades.

REVISED ENGINE WORKINGS, SOUTHERN REGION.—As from the second week in February a scheme of through engine workings between London and Exeter. Yeovil Junction and Plymouth, and Salisbury and Ilfracombe has been introduced by the Southern Region, in place of the existing practice of invariably changing engines at Salisbury and Exeter. In consequence, 27 changes of engine at Salisbury and seven at Exeter Central have been eliminated, though six changes have been introduced at Yeovil Junction. This has brought an economy of 14 engines and 19 sets of enginemen and has considerably reduced light-engine movements between Salisbury Motive Power Depot and Salisbury East Box, as well as between Exeter Central and Exmouth Junction Motive Power Depot.

Duke and Duchess of Gloucester's Visit to Nairobi

The Royal Train between Uplands and Matathia, East African Railways & Harbours

The Duke and Duchess of Gloucester at Kikuyu Station

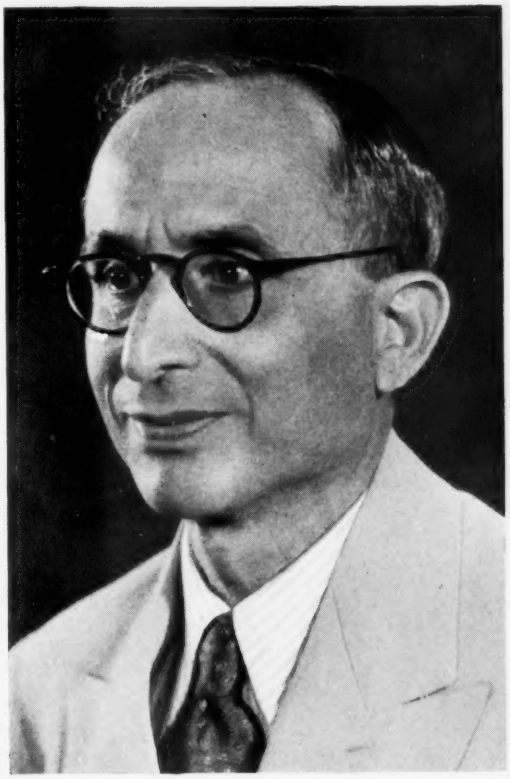
Left to right: Messrs. A. Dalton, General Manager; J. R. Farquharson, Chief Engineer; G. Gibson, Chief Mechanical Engineer, E.A.R. & H.; Sir Reginald Robins, East African Commissioner for Transport; Messrs. W. Urquhart, Assistant Chief Engineer; T. Davidson, Resident Engineer, Nairobi–Nakuru Realignment; and P. H. Hicks, District Engineer, Nakuru, E.A.R. & H.

RAILWAY NEWS SECTION

PERSONAL

RAILWAY EXECUTIVE APPOINTMENT

The Railway Executive announces that, with the concurrence of the British Transport Commission, Mr. H. H. Swift, Acting Electrical Engineer, Eastern & North Eastern Regions, has been appointed Executive Officer (Electrical Engineering, New Works & Development), Railway Executive Headquarters, London.



Mr. H. M. Jagtiani
Appointed General Manager, East Indian Railway

Mr. J. N. Das
Appointed Chief Commercial Manager, East Indian Railway

Mr. H. M. Jagtiani, who has been appointed General Manager, East Indian Railway, was born in 1896. He was educated at N.H. Academy, Hyderabad (Sind), and graduated from St. Xaviers College, Bombay, in 1916. In the next year he obtained a degree in law from Bombay University. He then went to England and entered the University of London for research, taking an M.Sc. degree in economics; he was also called to the bar by the Middle Temple. Returning to India in 1924 he joined the North Western Railway, and gained rapid promotion to the senior scale as Superintendent, Rates. In 1934 he was transferred to the Railway Board as a Deputy-Director (Traffic & Commercial). Later he was selected to go on deputation to the United Kingdom to study methods of compilation of railway statistics and their interpretation. The study was, however, interrupted by the outbreak of war, and he returned to India to take up duties in connection with the planning of war movements. He was promoted in 1943 as a Senior Deputy-Director with the Railway Board; later in the year he was sent on deputation to the Food Department as Director of Movements. Mr. Jagtiani returned in 1945 to the N.W.R., of which he later became Chief Commercial Manager. In 1947 he was transferred to the E.I.R. as Chief Commercial Manager.

Mr. J. J. Hughes, a founder member, and Chairman since 1931, of the Traders' Co-ordinating Committee on Transport, has decided not to seek re-election to the Chairmanship, and Mr. M. F. Barnard (Establishment & Transport Officer, British Iron & Steel Federation) has been elected Chairman. Mr. L. G. Burleigh (Transport Officer, Imperial Chemical Industries Limited) has been elected Vice-Chairman.

Mr. E. L. Taylor has been elected Deputy-Chairman of the British Travel & Holidays Association.

LONDON MIDLAND REGION STAFF CHANGES

Mr. C. F. Havord, Assistant to Stores Superintendent, Euston, to be Assistant Stores Superintendent, Euston.

Mr. A. R. McGibbon, Assistant (Lighting & Heating), Civil Engineer's Department, Euston, to be Lighting & Heating Assistant, Civil Engineer's Department, Euston.

Mr. J. N. N. Thompson, Assistant District Motive Power Superintendent, Bristol, to be Assistant District Motive Power Superintendent, Nottingham.

Mr. J. N. Das, who has been appointed Chief Commercial Manager, East Indian Railway, was born in 1898, and graduated with honours from the University of Calcutta in 1920. He proceeded to England, and during three years traffic training worked on the Lancashire & Yorkshire, L.N.W., and L.M.S. Railways. On his return to India Mr. Das joined the East Indian Railway in 1923 as Probationary Officer, but again proceeded to England in 1928 on study leave. He joined the London School of Economics, and headed the list of successful candidates in the University examination on Commercial Railway Economics. Returning again to India, he was posted as Assistant Transportation Officer in the coalfields. In 1938 he was promoted to district rank, and served in various capacities in the Operating and the Commercial Departments at headquarters. During 1940-43 he served as Operating Officer in the coalfields, and was responsible for supervising and co-ordinating the movement of coal and military traffic. In 1947 he was entrusted with the reorganisation work of the Claims Department of the E.I.R., and later in the year was appointed Divisional Superintendent, Allahabad, subsequently taking over as Divisional Superintendent, Howrah.

We regret to record the death on April 1 of Mr. W. F. R. Campling, O.B.E., Works Director of Thomas De La Rue & Co. Ltd.

Mr. H. E. Osborn

Appointed Director of Accounts & Budgets, British Transport Commission

Mr. C. E. R. Sherrington

Appointed Director of Research Information Division, British Transport Commission

Mr. W. H. McFadzean

Deputy-Chairman, British Insulated Callender's Cables; appointed also Chief Executive

Mr. H. E. Osborn, who, as recorded in our January 6 issue, has been appointed Director of Accounts & Budgets, British Transport Commission, is 40 years of age and is a Chartered Accountant. After serving with the firm of Deloitte, Plender, Griffiths & Company for nine years, he entered the service of the London Passenger Transport Board in 1936 in the Department of the Comptroller & Accountant. He assumed charge of the Statistical Office of that Department in 1939, and in the next year was appointed Assistant to the Chief Financial Officer of the Board. In 1942 Mr. Osborn was seconded, as Accounts Officer (Aircraft), to take charge of the financial and accounting work in connection with the Board's special wartime organisation for aircraft production, known as London Aircraft Production. In 1945 he was appointed Audit Officer to the Board, a position he held until appointed to the British Transport Commission in February, 1948, when he became Director of Accounts in the Comptroller's Department. Following the recent appointment of Mr. Basil Smallpeice, who was Director of Costs & Statistics, as Financial Comptroller of British Overseas Airways Corporation, Mr. Osborn has assumed also the responsibilities of the Director of Costs & Statistics, with the new title of Director of Accounts & Budgets. In the absence of the Comptroller, the Director of Acquisition (Mr. Andrew Black) acts as his deputy in the field of audit and acquisitions, and the Director of Accounts & Budgets (Mr. Osborn) acts as deputy in the field of funds and accounting work generally.

Mr. C. E. R. Sherrington, O.B.E., M.C., M.A., M.Inst.T., who, as recorded in our March 3 issue, has been appointed by the British Transport Commission as Director of the Research Information Division, Department of the Chief Research Officer, was born on February 21, 1897, at Liverpool, the only child of Sir Charles S. Sherrington, sometime Professor of Physiology, Liverpool University, lately President of the Royal Society, and Professor of Physiology, Oxford University, 1913-35. Mr. Sherrington attended Greenbank School, Liverpool, from 1905-10, and Shrewsbury School, 1910-15, after which he was commissioned in the Oxfordshire Light Infantry (Territorial Force). He was awarded the Military Cross on the field during the Battle of the Somme, and was invalided home with trench fever in 1916. From May, 1917, he served with the Railway Transport Establishment. He was at Gonville & Caius College, Cambridge, from 1919-21, taking honours in the Economics Tripos. He served as a

Mr. G. C. Gold

Appointed Assistant Mechanical & Electrical Engineer, Eastern & North Eastern Regions

Mr. L. Reeves

Appointed Assistant Carriage & Wagon Engineer, Eastern & North Eastern Regions

Mr. H. P. Harper

Appointed Staff Assistant to Mechanical & Electrical and Carriage & Wagon Engineers, Eastern & North Eastern Regions

Captain, Oxfordshire Light Infantry, 1920-25, and was then transferred to R.E. Transportation troops, Regular Army Reserve of Officers. Mr. Sherrington emigrated as a settler to Canada in April, 1922, and crossed to the United States in June of that year, becoming lecturer in economics at Cornell University. He was asked to return to England to be the first Secretary of the Railway Research Service (then known as the Railway Information Bureau) in 1924. He was awarded the Institute of Transport Railway Operating Gold Medal, 1936-37, for a paper on "The Transport and Distribution of Coal." He gave evidence before the Coal Commission in 1926, the Committee on Automatic Train Control in 1929, and the Channel Tunnel Committee in the same year. A year later he reported to the Weir Committee on Main-Line Electrification. He testified before a committee of the U.S. House of Representatives in 1939. He is a Fellow of the Royal Economic Society and the Permanent Way Institution, and a member of many other societies. Mr. Sherrington has contributed many articles to *The Railway Gazette* and other technical journals; and to *The American Economic Review* and *The Swiss Annals of Transport;* he has also published two books—"The Economics of Rail Transport in Great Britain" and "A Hundred Years of Inland Transport."

Mr. W. H. McFadzean, C.A., Deputy-Chairman of British Insulated Callender's Cables Limited, who, as recorded in our March 24 issue, has been appointed also Chief Executive of the company, was born in 1903 at Stranraer into a family of farmers. His first post was with the British Linen Bank, and he took his associate membership of the Institute of Bankers. He later went to Glasgow University, where he studied accountancy and law. In 1927 he qualified as a Member of the Institute of Chartered Accountants & Actuaries, but owing to his immediate move to the south was prevented from taking his finals in law. His first appointment on leaving Glasgow was with a firm of chartered accountants in Liverpool and London, where he was subsequently made responsible for auditing the accounts of the British Insulated Cables Limited. After five years of indirect association with the electrical industry, he joined that company in 1932 as first accountant. He was appointed Financial Secretary in 1937, and in 1942 became Executive Manager (Financial). In 1945 he was elected to the board of British Insulated Callender's Cables Limited, formed in that year by the merger of British Insulated Cables Limited with Callender's Cable & Construction Co. Ltd. Mr. McFadzean was made Deputy-Chairman in 1947. British Insulated Callender's Cables is the company responsible for supplying the overhead equipment for the recently-electrified Liverpool Street-Shenfield line of British Railways, Eastern Region.

Mr. G. C. Gold, A.M.I.Mech.E., M.I.Loco.E., who, as recorded in our March 3 issue, has been appointed Assistant Mechanical & Electrical Engineer, Eastern & North Eastern Regions, Doncaster, British Railways, was educated at Whitgift School, Croydon, and commenced his railway career in 1920 as premium apprentice under the late Sir Nigel Gresley, at Doncaster, Great Northern Railway. Four years later he went to Kings Cross, L.N.E.R., locomotive depot for running shed experience. In 1926 he was appointed Locomotive Inspector at York shed, and subsequently became Locomotive Shed Foreman at Northallerton. In 1928 he was appointed Locomotive Shed Foreman at Percy Main. Mr. Gold was later selected for special training in the Operating and Commercial Departments, and was appointed Stationmaster at Whitby (Town & West Cliff Stations), with additional charge of the locomotive depot. In 1936 he was transferred to Darlington as Assistant District Locomotive Superintendent and he was appointed Acting District Locomotive Superintendent in 1940, and Assistant Works Manager, North Road Works, Darlington, in 1942, being made Works Manager during the same year. He was appointed Mechanical Engineer, Gorton, in August, 1945, and Mechanical Engineer, Stratford, in January, 1947.

Mr. L. Reeves, M.I.Mech.E., M.I.Loco.E., who, as recorded in our March 3 issue, has been appointed Assistant Carriage & Wagon Engineer, Eastern & North Eastern Regions, Doncaster, British Railways, commenced his railway career as an indentured apprentice with the Great Eastern Railway in 1908, and, after carrying out technical studies at the Great Eastern Railway Institute, obtained a Directors' Full-time Scholarship at the East London College of London University. He occupied various positions at Stratford, where he was appointed Assistant to the Locomotive Works Manager in 1930. In 1933 he was made Assistant Locomotive Works Manager at Darlington, where he became Locomotive Works Manager in June, 1941. He was transferred to Scotland, as Mechanical Engineer, in May, 1942, and in June, 1945, was promoted Mechanical Engineer, Doncaster.

Mr. H. P. Harper, who, as recorded in our March 3 issue, has been appointed Staff Assistant to Mechanical & Electrical Engineer and Carriage & Wagon Engineer, Eastern & North Eastern Regions, Doncaster, British Railways, was educated at Doncaster Grammar School. He entered the service of the Great Northern Railway as a clerk in the Carriage & Wagon Department at Doncaster Works in 1906. He entered the Chief Mechanical Engineer's Office of the L.N.E.R. when that office was moved from Doncaster to Kings Cross in 1923. He was appointed Assistant Chief Clerk in that office in 1930, and Chief Clerk in 1935. In April, 1939, he was appointed Staff & Statistical Assistant to the Chief Mechanical Engineer, and on the return of the office to Doncaster in 1941 he was made Assistant to Chief Mechanical Engineer (Clerical).

We regret to record the death on April 3, at the age of 82, of Sir John Eaglesome, K.C.M.G., who was for many years General Manager of the Aire & Calder Navigation. Sir John Eaglesome, who was a Founder Member of the Institute of Transport, had previously been (from 1912-19) Director of Railways & Works, Nigeria.

ANGUS BUCHANAN—AN APPRECIATION

The death of Dr. Angus Buchanan, recorded in our March 31 issue, was a loss to his many friends among railwaymen of the former L.N.W.R. and L.M.S.R. He first went to Crewe as an assistant to Dr. Lowe, having studied at Edinburgh University and, after graduation, having held various hospital appointments. On the declaration of war in 1914 Dr. Lowe, a Territorial officer, was called up immediately, and Dr. Buchanan carried on the practice single-handed for a year. He then himself volunteered, served in Mesopotamia, 1915-17, returned to England, and later went to France. There, he insisted on serving as a battalion medical officer, attached to the 8th Battalion East Lancashire Regiment, through the Paschendaele offensive, and he was awarded the M.C. for his bravery during a gas attack, when he himself became severely gassed and blind for many months. In 1919 he returned to Crewe and re-started his practice single-handed. Later he worked in partnership with Dr. Gabbe, until he retired in 1938. At Crewe, he had been closely associated with the work of the L.N.W.R. Accident Hospital attached to Crewe Works, first with Dr. Lawrence and later with Dr. Moore, and in 1942 he returned to Crewe to work full-time at the hospital. Whether as friend, medical adviser or colleague, we all mourn the loss of one whose quiet humour, unselfishness and devotion to duty in spite of chronic ill-health was always an example and an inspiration, and whose passing leaves a gap which few can hope to fill.

G. E. G. P.

Leopoldina Scheme of Arrangement

The Leopoldina Railway scheme of arrangement, now published, to which Mr. C. H. Pearson, Chairman of the company, referred at the annual general meeting on December 29, 1949, recorded in our January 6 issue, is based on an estimate of not less than £8,486,029 available for distribution.

The first £6,933,558 will be allocated to redemption of the 4 per cent. debentures at £100, with one year's interest to December 31, 1947; to redemption of the 6½ per cent. terminable debentures at £105, with interest at 4 per cent. for 11½ years to December 31, 1947; to payment of £92 10s. per £100 stock to holders of 5 per cent. Leopoldina Terminal Company 5 per cent. first debentures, which are guaranteed by the railway company; and to transfer of £70 Leopoldina Terminal Company ordinary stock, valued for the purpose of the scheme at £6 10s., to each holder of £100 Leopoldina Terminal debentures. In the case of the Terminal Company stock, each £100 debenture will as a result be reduced to a nominal value of £1; the railway company will be released from its guarantee, but the rights of the debenture holders as to interest, including arrears, on the full amount of their holdings will be preserved against the Terminal Company.

Payment to Ordinary Stockholders

The next £1,552,471 will be applied to payment of £28 per £100 nominal on 5½ per cent. preference stock and of £11 per £100 nominal on the ordinary stock.

If the amount ultimately available for distribution exceeds £8,486,029, any excess up to £662,614 is to be divided into two equal parts: one to pay further interest on the 4 per cent. debenture stock and the 6½ per cent. terminable debentures *pari passu*, both at 4 per cent.; and the other to be divided as to 51½ per cent. to preference and 48½ per cent. to ordinary stockholders, that is, in the ratio of their participation in the £1,552,471 mentioned above. Any possible excess over £622,614 would be paid entirely to preference and ordinary stockholders, in the same ratio.

The scheme must be approved by the requisite majority of all classes of stockholders, who will consider it at meetings to be held on April 20. The debenture holders' committee is recommending approval, but the scheme is opposed by the committee of ordinary stockholders.

Ministry of Transport Accident Report

Euston, London Midland Region, British Railways: August 6, 1949

Colonel R. J. Walker, Inspecting Officer of Railways, Ministry of Transport, inquired into the accident which occurred at 8.28 a.m. on August 6, 1949, when the empty stock of the 8.30 a.m. express to Liverpool, consisting of 14 corridor coaches and weighing 421 tons, was propelled by mistake into No. 13 instead of No. 12 platform and collided at about 5 m.p.h. with the stock of the 8.37 a.m. Manchester express, consisting of 15 corridor coaches and weighing 472 tons. Twenty-five passengers and nine Railway and Hotels Executives staff were injured and treated in hospital, but only two were detained. Ten passengers were slightly injured and, after receiving first aid, continued their journey. A call for doctors over the loudspeakers met with an immediate response by several, and another doctor was on the scene at the time. Nos. 12 to 15 departure platforms were put out of action and a number of trains delayed, but normal working was resumed at 11.50 a.m. The weather was clear and fine and the rails dry.

Working Arrangements

The accompanying diagram shows the lines, signals, and so on immediately concerned. Empty stock trains come from the backing-out roads over either the down fast or the shunting line, entry into the platforms being controlled by a subsidiary colour-light signal over each. (The "off" indication of these consists of two diagonally placed small white lights under the red light, combined with a route indication alongside.) Entry into the individual platforms is controlled by ground signals 80 yd. beyond. No. 3 signal box controls the signals and connections from the backing-out roads to the down fast or shunting lines, the points in the latter being bolt controlled from No. 2 box, which controls all signals and connections from those lines into the platforms.

The route indicators and subsidiary signals are clearly visible from the backing-out roads and can also be seen with some difficulty from No. 3 box. A clear view of the departure platforms from No. 2 box is impeded by a bridge and when No. 13 is occupied it is frequently impossible to see trains standing in No. 14 or 15. There was no track circuiting at the time of the accident and nothing to indicate platform occupancy in the signal box. The signalmen had provided themselves with slates on which to record the movements in and out, and lever collars were used to remind them that an engine still remained in a road and required to be released.

When an empty stock train arrives at the exit from the backing-out roads the shunter informs No. 3 box which train it is to form. After an exchange of signals with No. 2 box the signalman there sets the road and pulls off the appropriate dwarf signal (at points 195, in this instance) and a light indicator then shows him which route is set up. On seeing this he pulls off the subsidiary signal on the gantry, where the route indicator shows to which platform the route leads. A lever known as "E," or No. 106, is then pulled, for the down fast or shunting line respectively, and this gives a visual indication in No. 3 box, denoting that the route is set and all signals are off. No. 3 box then clears the outlet ground signal, and the shunter operates a lever close to it working another signal at the far end of the siding near the propelling locomotive. The trip guard or shunter rides in the first coach fitted with a vacuum brake handle as the train runs into the station. On occasions vehicles are run in by gravitation alone.

At No. 3 box there is a trip guard, whose duty is to take empty stock trains in, but sometimes the shunter who has brought a train into the backing out roads continues to the platform while the trip guard takes another. This was so on the day in question. Daily sheets give the details about which train is to use this or that platform.

Evidence

The train to Manchester had been set into No. 13 platform early and that for Liverpool in No. 3 carriage line, ready to be propelled to No. 12. The latter platform had been used for the arrival of a sleeping car train, the empty stock of which could not be drawn out until 8.22 a.m., 37 min. late, and this made the Liverpool train late in setting in. A third train, which had a bearing on the case, the 8.55 a.m. to Wolverhampton, was moved from No. 4 carriage line to No. 14 platform two minutes before the Liverpool train, as this appeared the best course to follow in the circumstances. The trip guard took this train and the shunter the Liverpool train, although the trip guard, who thought he would have time to return to see to it, asked him not to do so. He knew from the train list what platform each particular train should enter and, before starting off, always looked at the route indicator by the subsidiary signal. He had never experienced a route indication being changed in his face and had he seen one differing from the list would have queried it with the signalman.

The evidence of the two signalmen at the No. 2 box was to the effect that almost every morning the 8.30 a.m. was set into No. 13 platform, but on this particular Saturday it was shown to go into No. 12, into which the route was standing set while the two men were discussing the movement. When the man not directly concerned with handling it noticed the Liverpool train going into No. 13 road he realised a mistake had been made and shouted to an inspector outside, who jumped on the platform and shouted to the shunter. The thought occurred to divert the train to No. 2 road, but the other train was standing foul of the route to it. The other signalman was evidently surprised to find the route set to No. 13 road.

This signalman said that the route remained set to No. 12 after the sleeping car stock had been taken out and he had no occasion or intention to alter it. He detailed to Colonel Walker the lever movements necessary to set the route to No. 12 or No. 13 and could not account for setting it to the latter in error. He thought he must have done so subconsciously in his anxiety to get the train in quickly, knowing that it generally went into No. 13. He knew, however, that it was to go into No. 12 and had chalked it up accordingly on his slate. When he saw it was going to No. 13 it was on 195 points and he could do nothing. He shouted from the box in an endeavour to attract attention. He agreed that the visual indicator showed "13" and he had looked at it, but its significance must have escaped him. He had been a signalman for 14 years and had had three months' special training before taking charge in Euston No. 2 on April 7, 1949.

The shunter, who had been in the railway service since 1935, said he brought the 8.55 a.m. train to No. 4 carriage line and found the trip guard, who was to take it into the platform, in No. 3 box. Hearing the 8.30 train accepted a few seconds after the 8.55 he told the trip guard he would take the former and, although the guard replied that he would return and do so, he decided to take it himself, to save time, knowing it to be late already. Normally, when booked to take a train in, he found its platform from the list, but on this occasion he had not been specifically instructed and did not look at it. He assumed the route indication "13" to be correct, but had he known the train to have been booked for 12 platform he would have queried it. After starting in the ordinary way he leaned out of the left window of the leading coach. There were no end windows and the vacuum handle was on the right, but he had to look out on the left to see signals. Passing the ground signal he heard shouting, crossed over and made a full brake application. He then saw the other train and thought he would be able to stop in time. The speed was reduced from about 15 m.p.h. to a walking pace at the moment of impact.

The driver said the train was moving down without the regulator being opened. Near No. 3 box he noticed the route indicator showing "13." He immediately applied the brake fully and the train started to pull up quickly.

The assistant stationmaster confirmed this evidence generally. It was quite customary for the shunter to take a train in when the trip guard was busy and he considered there was nothing unusual in his having done so, although asked not to by the trip guard. In fact, he considered he had done well, as the other course was causing delay. On occasions it was almost impossible for the shunter to see far ahead of him into the platforms. Theoretically he should go at walking pace, but practically that would be inconvenient. Shunters generally came in at 10 to 12 m.p.h.

The signalling apparatus was found to be in proper order.

Inspecting Officer's Conclusion

The accident was caused by one of the signalmen in No. 2 box inadvertently, and perhaps subconsciously, setting the route to No. 13 platform instead of No. 12. He has an excellent record and freely and honestly admitted the mistake. Colonel Walker accepts his statement that up to the last moment he thought he had set the route correctly.

A minor contributory cause was the shunter failing to verify the correct platform from the train list. Both men made mistakes, but it is thought that their actions were largely influenced by the knowledge that the 8.30 train was late and

keenness to get it away with as little delay as possible. Colonel Walker does not consider them seriously to be criticised, for these and other reasons.

The meaning of the subsidiary signals is well understood by all concerned, but the conditions of the working and layout are such that a shunter frequently has to look out on the left-hand side, and if there are no end windows he cannot see more than a few yards ahead. Strictly, he should not proceed at more than a crawling pace, but if that were done trains would not only fail to climb the slight rise to the buffers, but the whole station working would be delayed to an impracticable extent. Had the signal been strictly obeyed the accident would not have occurred, but no practical criticism can or should be levelled at the shunter on that account. It is suggested that in such situations a deviation from the letter or spirit of a rule should be covered by special instructions. Tacit acquiescence in the loose observation on one rule by custom may tend to weaken the authority of rules as a whole.

Remarks

As the lines are not track circuited and there is no indication of platform occupancy, although a train in one platform obscures the view of others, there is nothing to prevent one being routed by mistake into an occupied platform. The practice of chalking on a slate cannot be regarded as more than a casual reminder and is by no means reliable or positive.

Safety thus depends almost entirely on the organisation and discipline of the staff and, in particular, on the quality and skill of the signalmen. When unexpected and last-moment changes must be made, responsibility for safety falls more heavily on the staff in the absence of modern safeguards. It is a tribute to them that more accidents of this kind have not occurred at Euston in the past.

Reliance on the staff can be carried too far, and it is to be regretted that the installation of well-tried safety apparatus such as track circuiting, had been deferred for so long. A comprehensive and costly scheme for reconstruction of Euston Station, with re-signalling, had reached an advanced planning stage in 1939. The war intervened and another modified project was considered after it. It has proved impossible to revive either scheme in its entirety, but Colonel Walker considers that when this was known, simple track circuiting, only a small but important part of both the schemes, should have been put in without further delay. He is glad to report that this is being installed in platforms 12 to 15. The fact remains that the replacement and modernisation of the signalling at Euston is overdue, and he hopes that the complete scheme for it will not be much further delayed.

BRITISH OXYGEN COMPANY.—For 1949 the board of the British Oxygen Co. Ltd. recommend a final ordinary dividend of 12 per cent., making 20 per cent. for the year, the same as last year. Turnover for the year was a record, but group profits declined from £3,478,332 for 1948 to £3,264,022, mainly as a result of increased costs without a commensurate increase in selling prices. After crediting surplus tax reserves of £150,000 (nil) and deducting £101,678 (£107,463) attributable to outside shareholders the profit available to the members of the parent company was £1,055,047 (£1,200,531).

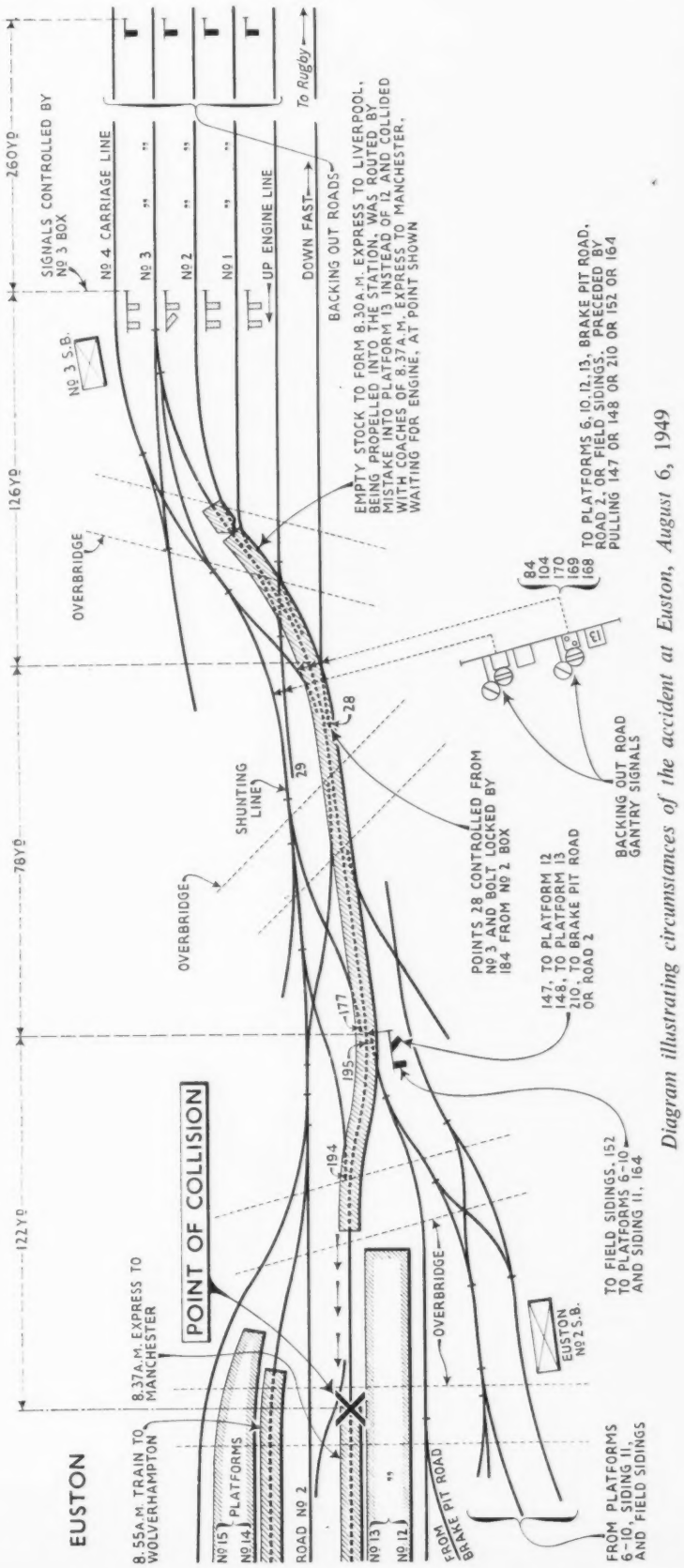


Diagram illustrating circumstances of the accident at Euston, August 6, 1949

Beyer, Peacock & Co. Ltd.

Mr. Harold Wilmot reports a year of continued progress and gives details of the recently registered company Metropolitan-Vickers—Beyer Peacock Limited

Mr. Harold Wilmot, Chairman, Beyer, Peacock & Co. Ltd., in a statement issued with the report and accounts, said that in May, 1949, Captain Hugh Vivian had retired from the office of Chairman, which he had held with distinction for twelve difficult years. So as to retain on a more comprehensive basis than would otherwise be possible the benefits of his specialised knowledge of fundamental and applied science, the Board had created, and Captain Vivian had agreed to accept, the new advisory office of President.

There were some small additions to plant and machinery during the year. The amount owing by subsidiary companies showed an increase of £7,000 and included a reserve for dividends receivable. Work in progress and stocks of stores and materials was £180,000 more than the amount for last year; progress payments on account of current contracts, however, were considerably higher. The figure for sundry debtors and payments in advance was lower by £97,000. Cash at bankers and in hand was higher by £290,000. Issued and paid-up capital at £900,000 remained unchanged.

Though the general reserve had been increased by a transfer from the profit and loss balance of £100,000 and now stood at a figure of £250,000, the carry-forward on profit and loss account at £48,154 showed a slight reduction, compared with the figure for the previous year. The increase in income tax reserve for 1950-51 was a reflection of the improvement in trading for the year under review.

Sundry trade and other creditors were higher by £58,000, compared with the amount for the previous year, and deposits on contracts showed an increase of over £260,000, representing further substantial advance payments received from overseas customers in respect of locomotive contracts on hand.

Increased Net Profit

The net profit for the year was £124,480, compared with £88,709 for 1948, a not unsatisfactory result in view of the trading difficulties experienced during the year. The consolidated profit and loss account of the company and its subsidiaries showed that the combined profit was £73,261 higher compared with the figure for the previous year. The provision necessary to meet the company's estimated liability in respect of taxation would be noted; this burden still remained most onerous and continued to limit their efforts to consolidate and strengthen the financial structure of the group. Though it may be hoped for, it could not be assumed that any tangible tax relief would be given to industry in the forthcoming Budget.

The volume of output of the company's factories during 1949 was again limited by labour shortage. Difficulties were experienced concerning certain grades of skilled labour essential to preserve the personnel in the balance required to meet production programmes. The overall shortage of suitable skilled workers in the locomotive industry remained acute, and in consequence their efforts to expand production activity were limited in scope and effect. Concerning the material supply position, there was some measure of improvement. Apart from a small number of "bottleneck" component items, the supply situation generally continued to improve.

The current order book of the company included Beyer-Garratt locomotives for Australia, Rhodesia, West Africa, South Africa, Chile, Brazil, and engines and tenders for Australia and Peru. Locomotive contracts on the books were of a record total and ensured that the company's manufacturing facilities would be engaged for a considerable time ahead. Despite increasing international competition there was still a reasonable locomotive market, including a fairly steady demand for the Beyer-Garratt type. The speed at which the requirements of overseas customers could be met continued to be limited by the shortage of skilled labour and, in lesser degree, of material supplies. It was, however, gratifying to record a substantial increase in export sales for the year. Deliveries included large Beyer-Garratt locomotives of the "EC3" type for the East African Railways and a further quantity of the "15th" class for Rhodesia. Beyer-Garratts were also shipped to Portuguese West Africa and Burma.

Metropolitan-Vickers—Beyer Peacock Limited

There was an increase in trade investments of £50,000, which represented the purchase at par of 50,000 ordinary £1 shares in the newly-registered company, "Metropolitan - Vickers — Beyer Peacock Limited." The other 50,000 ordinary share were owned by Metropolitan-Vickers Electrical Co. Ltd., and there was a legal arrangement which provided for a continuance of equal equity partnership in the future. The new company had been formed to design, manufacture and assemble railway locomotives other than steam. It had already secured its first order, and production in a new factory near Stockton-on-Tees was about to commence. In this venture their partners had a world-wide reputation in the electric traction field and had already made considerable strides in traction gas-turbine development. Mr. E. W. Steele, Director & General Manager of Works of Metropolitan-Vickers Electrical Co. Ltd., was Chairman of the company, while their Technical Manager, Mr. James Hadfield, M.B.E., was Managing Director. Beyer Peacock was further represented on the Board by two of its Directors, Mr. W. Cyril Williams and Mr. L. T. Dawes.

They had concluded these arrangements with confidence, and the judgment of the Board was that the enterprise so started and the manner by which progress may be envisaged constituted a further step in the company's policy of broadening and advancing its basis of operation and interests.

During the year under review they had continued in their policy of maintaining close personal "on the spot" contact with overseas events and personalities. In this respect executive and technical officers of the company had visited the Portuguese West African Colonies, Kenya, Rhodesia, South Africa, Portugal, United States of America, and Northern Ireland.

Their subsidiary company, the Richard Garrett Engineering Works Limited, had continued production at a satisfactory level. At the same time they were tooling up for new products and had maintained their policy of research, experiment and prototype development. The cost of the latter work was not unimportant, but was well within their resources, and their general policy of writing off such items as they arose preserved the conservative nature of the Board's approach to asset valuation. Their Leiston order book was good, and the prospects of this subsidiary appeared to be promising.

During the past year, three officials had retired: Mr. Peter P. Stevenson, Stores Surperintendent, and during the last war Captain and Commanding Officer of the Gorton Works Home Guard Company, who had 32 years' service with the company; Mr. Peter Gleaves, Registrar, who had 51 years' service; Mr. Arthur Ogden, Buyer, who had 51 years' service. During the year, 19 employees had completed 50 years' service; in each case the event had been recognised in a suitable manner. The company had been indirectly honoured by the Institution of Locomotive Engineers in 1949, in that Mr. W. Cyril Williams was elected to the office of President of that Institution for 1949-50.

Any exporting company was aware that overseas customers were at least as discriminating and critical as home buyers. One of their problems, therefore, was to ensure that by the clearest policies and the closest collaboration their team operated with such effectiveness that customers were increasingly impressed by the worth of their products and the value of their service. Of the future he did not venture prediction save to remark that the company was well equipped to serve its railway friends, and throughout the organisation there was a constant determination that today's performances should be improved tomorrow. So long as this outlook persisted, the Board was confident that the company would secure its share of available business.

The annual general meeting of the company is to be held in London on May 2.

Railway Ball in Paris

The ball of the Foyer Interallié des Chemins de Fer (the Inter-Allied Railway Club), to which reference was made in our March 17 issue, will be held in Paris on April 21 on the premises of the International Union of Railways, at 10, Rue de Prony, 17e, lent for the occasion by M. Lemaire, President of the Union.

The ball will be known as the "Nuit de la Locomotive." It is hoped that the President of the Republic, M. Auriol, or the Premier, M. Bidault, will be present. The ball will be opened at 10 p.m. and continue until the early hours.

Tickets, the cost of which is 1,000 francs, reduced to 500 francs for club members and their wives and children, include refreshments at the buffet; tickets for sit-down supper cost 600 francs. Both may be obtained daily, except Saturday, between 12 noon and 3.30 p.m. from the Foyer Interallié, 11, Rue de Milan, near St. Lazare Station. Club members may also purchase tickets, price 1,000 francs, for their personal guests.

The "Nuit de la Locomotive" is one of the series of social activities, now resumed, of the Inter-Allied Railway Club; during the past winter the activities were curtailed in respect to the memory of the late Mr. A. M. Newbold, former Vice-President of the club. Members of the Transportation Club, London, are *ipso facto* honorary members of the Foyer Interallié.

Parliamentary Notes

Non-Smokers in Restaurant Cars

Miss Elaine Burton (Coventry, South—Lab.), on the motion for the adjournment of the House of Commons on April 3 raised the question of accommodation for non-smokers in railway restaurant cars. She said it had been stated that 80 to 85 per cent. of passengers were smokers, and therefore only 15 per cent. of accommodation was given to non-smokers. On that basis, she reckoned that at least 1½ million meals a year must be eaten by non-smokers. She had received a good many letters on the subject, and some had come from doctors who said it really was injurious for people to have to travel in smoke all the time.

Mr. Alfred Barnes (Minister of Transport) pointed out that during the war the restaurant car service had been withdrawn and that there had been a change in the attitude towards smoking, particularly on the part of women.

Notices were now exhibited requesting passengers not to smoke before or during the service of meals; but on long journeys there were often two or three services, and, while the rule might be observed during the first service, it became more or less inoperative afterwards. He was informed that, of the 7,000 recent complaints the Railway and Hotels Executives, which had a joint responsibility in the matter, had received only one had been about lack of provision of non-smoking accommodation.

He accepted the principle that those Executives must in the long run provide the requisite accommodation to meet the habits of the people who were travelling.

Mr. Barnes added that travellers must bear in mind that it was not necessary to smoke in the restaurant car itself. The bulk of the accommodation on trains today was at the disposal of smokers, and it was not unreasonable to ask people to suspend smoking for five or ten minutes; if they were in a hurry, they could get their bills quickly and repair to smoking compartments.

Questions in Parliament

Membership of Transport Commission

Mr. Peter Thorneycroft (Monmouth—C.), on March 27, asked the Minister of Transport when it was intended to fill the vacancy for a full-time Member of the Transport Commission.

Mr. Alfred Barnes, in a written answer, stated: It is my intention to make this appointment as soon as possible.

Area Users Consultative Committees

Mr. H. Hynd (Accrington—Lab.) on April 3 asked the Minister of Transport when he proposed to set up Area Users Consultative Committees throughout the country.

Mr. Alfred Barnes: The Central Transport Consultative Committee has been in existence since December, 1948. Committees for Scotland and Wales are operating, and I recently set up the Area Transport Users Consultative Committee for London. My view is that, until the British Transport Commission has had a reasonable time in which to make progress in the consolidation of its undertakings, it is not desirable to set up the local committees provided for in the Act. I had also hoped that I could take into consideration the needs of Area Road Passenger Schemes in deciding the areas of these consultative committees, but progress in this direction has not been as rapid as I would have wished, and, consequently, I propose to reconsider the establishment of these committees.

Mr. Hynd: Is the Minister aware that if those bodies were set up the relationships between the Transport Commission and the users of transport would be very much better than they are at present?

Level Crossings

Mr. David Renton (Huntingdon—Lib. Nat.) on April 3 asked the Minister of Transport whether he had yet received the report which in February, 1949, he had asked the Transport Commission to submit on the question of occupation of level crossings; and what steps he proposed to take to bring the legal position of persons using such crossings into line with modern practice.

Mr. Alfred Barnes: No, Sir, but I am informed that considerable progress has been made in the study of the legal and practical problems involved, and that the British Transport Commission expects to be able to send to me in the course of the next few weeks the report which the Railway Executive is preparing.

Losses in Transit

Brigadier Terence Clarke (Portsmouth West—C.), on March 21, asked the Secretary of State for War what had been the value of Government stores and supplies, the property of his department, lost in transit on the railways each year since nationalisation.

Mr. John Strachey (Secretary of State for War): The value of War Department stores and supplies lost in transit on the railways each year since the railways were nationalised is not available without lengthy research, but test checks in 1948 and 1949 indicate that losses are of the order of £5,000 to £10,000 a year. In 1947 (before nationalisation) a test check showed that losses amounted to some £20,000 a year.

Brigadier Clarke: Does the Secretary of State realise that before nationalisation these losses were borne by the railways, but now by the War Department and the State? Further, would he see that the loss is now debited to the railways and credited to the War Department

Mr. Strachey: I am aware that before nationalisation the losses were debited to the railways, and I am also aware that the losses after nationalisation are debited to the railways.

Acquisition of Road Haulage Undertakings

Miss Irene Ward (Tynemouth—C), on March 27, asked the Minister of Transport (1) how many owners or ex-owners of undertakings compulsorily acquired by the British Transport Commission knew the final amount of their total compensation; and how many of those had received final and total payment; and (2) how many "A" licence holders had been taken over; what were the total payments involved; the number of dispossessed holders who had been notified of the compensation payable; and the number who had received payment.

Mr. Alfred Barnes, in a written answer, stated: The British Transport Commission has informed me that up to February 28 the undertakings of 1,579 "A" and "B" licence holders have been transferred to the Commission. The total payments involved will not be known until all valuations of assets have been completed and accounts received from the transferors, so that compensation can be finally assessed and, where necessary, confirmed by the Transport Arbitration Tribunal. Out of 1,069 cases in which it had been possible to calculate a provisional ascertainment of compensation up to February 28, 1950, notification had been given to 985 transferors. Up to the same date, payment in Transport Stock and/or cash of compensation provisionally ascertained, less a deduction of 10 per cent. in accordance with section 48(1) of the Transport Act, had been made on 664 cases, in addition to which cash advances had been made in 293 smaller cases. In 78 cases payment of compensation in the form of Transport Stock was offered by the Commission at dates from October 31, 1949, to February 17, 1950, but the transferors chose to wait until April 1, 1950, for payment.

Fire on Edinburgh-Kings Cross Express

Mr. B. Janner (Leicester North West—Lab.) on March 20 asked the Minister of Transport if his attention had been called to the fact that clear cellulose lacquer with which the walls of the corridor had been sprayed had caused the rapid spread of fire on an Edinburgh-Kings Cross express on June 23, 1949; whether he could give an assurance that all coaches sprayed with that material had been withdrawn; and whether he would see that no lacquer of that kind was used on any public transport vehicles.

Mr. Alfred Barnes stated in a written answer: The answer to the first two parts of the question is in the affirmative, and I am sending Mr. Janner a copy of the Inspecting Officer's report, which has already had considerable publicity. The attention of the Railway and London Transport Executives has been drawn to the recommendations in the report, and I am also arranging for it to be brought to the notice of the associations concerned with passenger road vehicles.

Staff & Labour Matters

British Railways Promotion Scheme

The new promotion, transfer, and redundancy scheme agreed between the Railway Executive, the N.U.R., and the A.S.L.E.F., and in force since April 2, which was the subject of editorial comment in our last week's issue, covers staff embraced by five sectional councils: No. 1, engine cleaners, firemen, drivers, and motormen; No. 2, locomotive shed grades; No. 3, operating grades; No. 4, goods and cartage grades; and No. 5, permanent-way and signal & telegraph staff.

The promotional area for footplate staff is the Region concerned, but for other staff it is the divisional or district officer's district, or the area signal & telecommunication inspector's districts; sectional councils may combine districts in the same Region into one promotional area for particular grades or sections of staff in councils 3, 4, and 5.

Application for Vacancies

Vacancies will be advertised in the promotional area in which they occur. Staff may apply for an advertised vacancy if employed in the promotional area and in a grade in the promotion diagram covering the grade in which the vacancy occurs. In the case of footplate staff, only firemen-put-back and engine cleaners may apply for advertised vacancies for firemen, and so on. Where redundancy occurs, the junior in the grade at the station, depot, and so on, will be considered redundant.

Inter-Regional transfers, for other than footplate staff, will be permitted in the case of men in the starting grades by transfer to other starting grade posts or, for men above the starting grades, by reversion to a starting grade.

Notes and News

Draughtsman Required.—The Gloucester Railway Carriage & Wagon Co. Ltd. require the services of an experienced rolling stock draughtsman. See Official Notices on page 435.

Diesel Engine Users Association.—The annual luncheon of the Diesel Engine Users Association will be held at 12.30 for 1 p.m. on April 20 at the Connaught Rooms, Great Queen Street, London, W.C.1.

Senior Mechanical Draughtsman Required.—A senior mechanical draughtsman is required for an engineering establishment in Glasgow, preferably with steam, diesel or electric locomotive experience. See Official Notices on page 435.

Colonial Railway Standards Conference.—The initials of Mr. Greaves, one of the representatives of the Crown Agents for the Colonies, who attended the Colonial Railway Standards Conference from March 27-31, are J. R. E., and not as stated in our March 31 issue.

Aer Lingus Summer Schedules.—The summer schedules of Aer Lingus, which come into effect on April 16, provide for an increase of nearly 20 per cent. over the number operated during the equivalent period of 1949. On the London-Dublin route, services will increase from an average of eight daily in April, to 72 a week at the peak of the season.

Vulcan Foundry Limited.—The net profit of the Vulcan Foundry Limited for 1949 amounted to £119,263 as compared with £73,705 in 1948. The profit is struck after charging £146,886 for tax, against £81,748 in 1948, and bringing in £9,896, against £9,955 as dividend from a subsidiary company. Allocations are recommended of £10,000, the same as previously, to pensions reserve; £10,000, against nothing, to employees welfare reserve; and £65,000, against £30,000, to general reserve. The carry forward is maintained at £54,301, against £53,000 brought in. A dividend of 5 per cent. and bonus of 1½ per cent. are recommended on ordinary stock, the same as previously.

New London-Scotland Air Service.—On April 17 British European Airways is starting a new London-Edinburgh-Aberdeen-Orkneys and Shetlands air service, which will be additional to the present service between London and Edinburgh.

Spanish Express Derailed.—Nineteen persons were reported killed and more than 100 injured when three coaches of a Madrid-Oviedo express were derailed on April 6 near Villalana Station, 18 miles from Oviedo. The three coaches rolled down a 35-ft. embankment on to a road, and the rest of the train continued on the track. Many victims were pinned beneath the wreckage.

Special Travel Arrangements Programme.—A programme of events and travelling facilities from Glasgow during April has been produced by the Scottish Region of British Railways. This four-page programme lists day by day the various sporting and other events in connection with which special trains are being run, or cheap fares introduced. It is the intention to issue the programme, which is of a convenient size, each month.

The Melesco Society.—A meeting of the Melesco Society was held in the private cinema of Gaumont-British Equipments Limited, Wardour Street, London, W.1, on April 4, with Mr. E. A. Robinson, Managing Director of the Superheater Co. Ltd., in the chair. The proceedings included an illustrated talk on "The Beginnings of a Railway," by Mr. M. A. Crane, Assistant to the Sales Director, Beyer, Peacock & Co. Ltd., and the showing of the film "The Locomotive," loaned by the Locomotive Manufacturers Association of Great Britain. The film was introduced by Mr. J. W. Vaughan, Director & Legal Adviser, Locomotive Manufacturers' Association of Great Britain. Also shown was a film of Chittaranjan, site of the Indian Government locomotive works, taken by Mr. Gerald Collingwood, Managing Director of the Vulcan Foundry Limited, during the visit of the British Mission to India, reference to which visit was made in our issue of December 16, 1949.

London Transport Dramatic Club.—On April 20, 21, and 22 the London Transport Dramatic Club will present the Ben Travers farce "Rookery Nook" at the Fortune Theatre, Drury Lane, W.C.2. Tickets are obtainable, price 7s. 6d., 5s. and 3s. from Mrs. V. B. Robertson, Welfare Office, Baker Street Station, London, N.W.1.

Transport Architecture Exhibition.—Although it has been announced that the major exhibition of the Royal Institute of British Architects for 1950 would deal with transport and would be held in June, information concerning many interesting transport projects will not be available by that time and it has now been decided to hold the exhibition at the beginning of 1951. This will give an opportunity for projects which are now in the early stages, to be more fully illustrated in the exhibition.

Institution of Locomotive Engineers Summer Meeting.—As briefly recorded in our April 7 issue, the summer meeting of the Institution of Locomotive Engineers will be held on Friday, May 12, and will take the form of a visit to Swindon locomotive works. The party will assemble at Paddington Station for a special train scheduled to depart at approximately 11.50 a.m. and to arrive at Swindon at 1.15 p.m. The return journey will also be by special train, leaving Swindon at 5 p.m. and arriving at Paddington at 6.25 p.m. The train will be formed of third class vestibule stock with kitchen cars for the service of luncheon and tea.

Birmingham & Midland Motor Omnibus Company.—The aggregate net profit for the year ended December 31, 1949, of the Birmingham & Midland Motor Omnibus Co. Ltd. was £864,983, as compared with £656,282 for 1948. Deduction of £14,291 balance of profits retained by subsidiaries and addition of £388,434 balance from 1948 give a total of £1,239,126 (£997,686). Of this £500,000 (£248,452) is appropriated to the general reserve, and the remainder is recommended for distribution as dividend on the 8 per cent. cumulative preference shares, 25 per cent. dividend for the year on the ordinary shares, and 20 per cent. bonus on the ordinary shares, less tax in each case, which is the same as for last year; the balance carried forward is £378,326.

S.R. Debating Society.—On April 5 Mr. C. P. Hopkins, Chief Regional Officer, Southern Region, and President of the Southern Region Lecture & Debating Society, took the chair at the Chapter House, S.E.1, when prizes were awarded to the successful competitors in the annual prize essay competition. The subject of the essay was "The Ideal Railway Station." First prize was awarded to Mr. E. J. Pond, Bournemouth Central Goods, the second to Mr. C. J. Parker, Salisbury Motive Power Depot and the third to Mr. C. E.

Sir Cyril Hurcomb's Visit to Manchester

During his recent visit to Manchester Sir Cyril Hurcomb inspected Newton Heath Motive Power Depot

Left to right: Mr. E. F. Horne, District Motive Power Superintendent, L.M.R., Sir Cyril Hurcomb, Chairman, British Transport Commission, Mr. J. H. Brebner, Chief Public Relations & Publicity Officer, B.T.C., Mr. John Elliot, Chief Regional Officer, L.M.R., and Mr. A. H. Madden, Divisional Motive Power Superintendent, L.M.R., watching the operation of the hydraulic wheel drop

Wild, Continental Department. After Mr. Hopkins had congratulated the prize-winners on their essays and had complimented the Society on its many years of progressive and enterprising membership, the winning essays were read by their authors.

Alfred Herbert Limited.—For the year ended October 31, 1949, the consolidated profit with other income of Alfred Herbert Limited was £1,875,334, as compared with £2,025,189 for the preceding year. Deduction of £783,404 (£873,385) for tax, £149,025 (£118,878) for depreciation, and deduction for other items, gives a net profit of £818,090, against £871,304. The trading profit of the parent company was £1,722,115 (£1,900,086). Sums of £143,196 (£114,693) are allotted to depreciation, £94,737 to replacement of tools, £34,501 to increase in provision for diminution in value of stock, and £783,404 to tax, which with other allocations leave a net profit of £711,355 (£833,334). An ordinary dividend of 20 per cent., tax free, is recommended, as for last year (when a special capital dividend of 2 per cent. was paid), which after payment of preference dividend gives a balance carried forward of £2,277,306. The annual general meeting will be held on April 26.

Beyer, Peacock & Company.—For the year ended December 31, 1949, the group profit of Beyer, Peacock & Co. Ltd. was £355,624, compared with £283,248 for the preceding year; the group net profit, after deduction of £139,373 (£87,740) tax and other items is £145,706 (£131,781), and that of the parent company £124,480 (£88,709). The sum of £100,000 (£50,000) is to be placed to general reserve, and preference and 5 per cent. ordinary (with 1 per cent. bonus) dividends are recommended, as for last year, leaving £48,154 (£52,549) to go forward. The consolidated current assets of £1,740,890 (£1,404,518) include £1,107,211 work in progress and stores; current liabilities are £1,041,354 (£780,827), of which £456,766 is deposits on contracts.

Road Haulage Association.—The annual general meeting of the Road Haulage Association will be held at Beaver Hall, Great Trinity Lane, London, E.C.4, at 10.30 a.m. on April 27. This will be preceded by a meeting of the retiring National Council at 9.30 a.m. and followed by the first meeting of the newly appointed National Council.

Model Railway Exhibition.—The 1950 Model Railway Exhibition was opened at Central Hall, Westminster, on April 11, and will be on show from 11 a.m. to 9 p.m. daily until April 15. The Exhibition retains many of its usual features, though there have been some changes in the working layouts section and various individual models are making their first appearance. There are a number of additions to the British Railways layout and in a separate casing a model of a high-speed track-relaying unit is being exhibited. Mr. P. B. Denny is showing a Buckingham branch-line layout which is a successor to an earlier version, though still is unfinished; this portable 18 mm. gauge line is 11 ft. 6 in. by 8 ft. 6 in. A 2 mm. model section has been introduced and among the locomotives, wagons, and lineside accessories exhibited is a "West Country" Pacific by Mr. H. B. Whall. Among the many other interesting features of the Exhibition are Ivatt Atlantic No. 272 by Mr. A. A. Ficker, which incorporates material from the original locomotive; a 4 mm. K. & E.S.R. 0-6-0 tank engine by Mr. M. L. Finch; an "O" gauge 4-6-2, *Sir William Stanier*, by Mr. J. S. Beeson; and an unfinished 4 mm. scale "Terrier" tank engine by Mr. L. K. Johnson.

Accident on Leopoldina Railway.—More than one hundred passengers are reported to have been killed on April 6 when a night train from Rio de Janeiro to Victoria on the Leopoldina Railway plunged into the River Tangua. It is believed that heavy rains had washed away the approaches to the bridge. Many of the victims were trapped in the coaches and drowned.

San Paulo (Brazilian) Railway.—Reference was made in the report in our January 6 issue of the annual general meeting of the San Paulo (Brazilian) Railway Co. Ltd., to reimbursement of the company for expenditure incurred in supplying stores and rolling stock to the Santos-Jundiai Railway (the name by which the former San Paulo Railway has been known since appropriation). Reimbursement of Cr.$74,518,985 (£988,381) was effected on March 13, this sum to be used in settlement of the cruzeiro liabilities; this settlement does not, however, release funds held in London, for in repaying 50 per cent. of

Presentations to Mr. R. M. T. Richards on his Retirement

Mr. C. Grasemann, Public Relations & Publicity Officer, S.R., presenting Mr. and Mrs. Richards with a portrait of the former (see page 399, *of our April 7 issue*)

Left to right: Mr. S. B. Warder, Mechanical & Electrical Engineer, Mr. Richards, Deputy Chief Regional Officer, Mr. O. W. Cromwell, Chief Officer for Labour & Establishment, and Mr. P. Nunn, Commercial & Operating Divisional Superintendent, London (East)

the nominal value of the ordinary stock in August, 1949, credit was taken for £988,381 to offset cruzeiro debts. Regarding repayment of £331,000 balance of the amount spent by the company on supply of materials to the railway, the Brazilian Ministry of Transport has lodged the necessary application with the Ministry of Finance, but some time must elapse before the necessary credit can be authorised.

Brush Electrical Engineering Co. Ltd.—The directors of the Brush Electrical Engineering Co. Ltd. announce that the net profit of the Brush group for the year ended December 31, 1949, subject to taxation, was £1,307,485, which compares with £868,467 for the previous twelve months. The net profits after taxation were £653,878 and £651,510 respectively and the tax charge for 1948 was low because the profits of the holding company bore no tax for that year due to claims for relief in respect of past losses. General reserve will be increased by £500,000, against £250,000, bringing the total to £1 million, and the final ordinary dividend of 6 per cent. will make 10 per cent. for the year.

Forthcoming Meetings

April 14 (*Fri.*).—Institution of Railway Signal Engineers, at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, at 6 p.m. "Some Comments on the Introduction of F.B. Rails in Britain and its Effect on Signalling," by Mr. J. H. Devine.

April 14 (*Fri.*) and 15 (*Sat.*).—British Railways, Southern Region, Lecture & Debating Society, and North Eastern Region Federation of Lecture & Debating Societies joint meeting at York.

April 14 (*Fri.*).—Railway Students' Association, London School of Economics & Political Science. Annual Association Dinner & Dance, at the London Transport Executive Dining Club, Pelham Street, South Kensington, at 6.15 for 6.30 p.m.

April 14 (*Fri.*).—Railway Club, 57, Fetter Lane, London, E.C.4, at 7 p.m. "Southern Region Electric Rolling Stock", by Mr. H. C. Hughes.

April 15 (*Sat.*).—Stephenson Locomotive Society. Special train tour of South London railways for members and friends; depart Kensington (Olympia) at 2.15 p.m.

April 15 (*Sat.*).—Permanent Way Institution, Manchester & Liverpool Section, joint meeting with Irish Section.

April 18 (*Tue.*).—Institute of Transport, Informal Luncheon, at the Connaught Rooms, Great Queen Street, London, W.C.2, at 12.45 for 1.15 p.m. Speaker: Sir Miles Thomas, Chairman, B.O.A.C.

April 19 (*Wed.*).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. "Standardisation and Design of Goods and Mineral Wagons as applied to British Railways," by Mr. C. A. Gammon.

April 20 (*Thu.*).—Diesel Engine Users' Association, Annual Luncheon, at the Connaught Rooms, Great Queen Street, London, W.C.2, at 12.30 for 1 p.m.

April 21 (*Fri.*).—Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. "Stages in the Development of the Steam Locomotive to Restore it to its Supremacy as the Ideal Railway Traction Unit," by Mr. O. V. Bulleid, Past-President.

Railway Stock Market

As expected, markets are showing renewed caution whilst awaiting the budget, and business generally is moderate, although, at the time of going to press, industrial shares are firm and British Funds have moved higher on balance. The City continues to believe that there will be no important reduction in taxation, which would necessitate big cuts in Government expenditure. Moreover, owing to the downward trend in company profits, which seems likely to increase later in the year, the Chancellor of the Exchequer must be prepared for reduced revenue from income and profits tax; it is still assumed that he will make an appeal for continued dividend limitation, but that no move will be made to enforce this by law.

The main interest in foreign rails has centred on Leopoldina stocks after publication of the proposed pay-out scheme, which created, on the whole, a favourable impression; it was followed by much profit-taking by speculators who bought the stocks during the past 18 months at prices below current levels. Nevertheless, current prices are below the pay-out levels based on the proposed scheme, due partly to the necessity for final ratification by the Brazilian Government.

At the time of going to press, Leopoldina 4 per cent. debentures are 93, but are thought to have a pay-out value of rather more than 102, while the 6½ per cent. debentures, now at 125, have a pay-out of rather more than 130. Pay-out for the preference stock is 28 and the current price 25½, while the ordinary, which have come back to 9, will be worth two points more than this when the pay-out is finally made. Leopoldina Terminal 5 per cent. debentures have come back sharply to 90 and the ordinary units to 1s. 9d. At these levels, however, stocks of Leopoldina and Leopoldina Terminal attracted buyers.

After their recent rise, Great Western of Brazil came back to 139s. 4½d. In this case the eventual pay-out has been estimated by the directors at 155s. at least. San Paulo 10s. units have eased to 14s. 4½d. United of Havana stocks were marked lower on the estimated working loss of £800,000 last year, and the continued lack of news of take-over negotiations.

Antofagasta ordinary and preference were 7¾ and 44 respectively, and Brazil Rail gold bonds steady at 42. In other directions, Central Uruguay were again quoted at 10. Manila "A" debentures were 88, and the preference shares 8s. 10½d. Nitrate Rails were sold around 73s. 9d. Taltal shares reflected some profit-taking, the price easing to 18s. 6d. since the recent rise. White Pass Yukon 6 per cent. debentures were 73½.

Evidence of the continued high investment status of road transport and allied shares is provided by their valuation in some cases on a smaller yield basis than leading industrial shares. This reflects general recognition of the strong financial position of most of the road transport companies and also the belief that in the event of nationalisation shareholders would receive more than the current price of the shares. Southdown, for example, are now 125s., at which there is a yield of only 4 per cent. on the basis of last year's 25 per cent. dividend. In the case of West Riding, however, the yield is over 4½ per cent.; and Lancashire Transport, at 83s., yield nearly 6 per cent. B.E.T. deferred stock changed hands around 445.

The annual reports of locomotive building and engineering companies show a strong position, with some good order books, which has tended to draw rather more attention to their shares. Vulcan Foundry have risen sharply to 19s. on the results. Beyer Peacock were 20s. 3d., North British Locomotive 17s. 7½d., T. W. Ward 56s. 6d., Gloucester Wagon 47s. 6d., and Wagon Repairs 5s. shares 16s. 3d.; Birmingham Carriage were 29s., at which there is a yield of over 5 per cent. At Glasgow, Hurst Nelson were 57s. 6d. and yield over 6 per cent.

Iron and steel shares generally have remained steady, with Vickers at close on 28s. pending the dividend announcement.

Locomotive builders and engineers are expected to continue to achieve satisfactory results for the present, bearing in mind orders booked and coming to hand. Economies at home, and currency and political difficulties abroad, do not seem likely to have any serious effect on current earnings. Beyer Peacock is among companies reporting record locomotive contracts, which ensure that its manufacturing facilities will be engaged for some time to come.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1947/48	No. of week	Aggregate traffics to date: Total 1948/49	Aggregate traffics to date: Increase or decrease
South & Central America	Antofagasta ...	811	2.4.50	£ 47,740	– £ 20,200	13	£ 770,744	– £ 114,390
	Costa Rica ...	281	Feb., 1950	c685,032	– c248,448	35	c6,604,802	– c1,416,433
	Dorada ...	70	Feb., 1950	39,908	+ 11,844	8	78,005	+ 18,292
	Inter. Ctl. Amer. ...	794	Feb., 1950	$1,181,630	+ $182,446	8	$2,468,266	+ $379,280
	La Guaira	22¾	Mar., 1950	$105,900	– $7,858	13	$263,249	– $66,504
	Nitrate	382	31.3.50	22,876	+ 1,141	13	120,694	+ 15,427
	Paraguay Cent. ...	274	31.3.50	₲160,891	+ ₲63,711	13	₲5,602,775	+ ₲1,557,430
	Peru Corp. ...	1,050	Feb., 1950	S5,954,700	+ S1,290,676	35	$46,205,358	+ $14,445,660
	,, (Bolivian Section)	66	Feb., 1950	Bs.9,346,000	+ Bs.1,867,691	35	Bs.81,738,164	+ Bs.13,679,397
	Salvador	100	Dec., 1949	c278,000	+ c11,000	26	c730,000	– c46,000
	Taltal	154	Feb., 1950	12,890	+ 1,295	35	103,045	+ 34,115
Canada	Canadian National†	23,473	Feb., 1950	12,255,000	– 45,000	8	23,935,000	– 801,000
	Canadian Pacific† ...	17,037	Feb., 1950	8,801,000	– 166,000	8	16,982,000	– 1,240,000
Various	Barsi Light* ...	167	Feb., 1950	25,470	– 3,272	48	324,240	+ 21,755
	Egyptian Delta ...	607	28.2.50	15,096	+ 191	48	626,544	– 42,887
	Gold Coast... ...	536	Feb., 1950	234,159	– 6,199	48	2,547,700	+ 163,306
	Mid. of W. Australia	277	Jan., 1950	34,405	+ 7,202	31	211,561	+ 8,509
	Nigeria	1,900	Jan., 1950	502,360	+ 38,978	44	5,017,814	+ 266,573
	South Africa ...	13,347	18.3.50	1,375,994	– 36,707	50	73,938,835	+ 5,272,137
	Victoria	4,744	Dec., 1949	1,866,026	+ 372,920	26	—	—

* Receipts are calculated @ 1s. 6d. to the rupee

† Calculated at $3 to £1